

AD-A080 852

RAND CORP SANTA MONICA CA

ALTERNATIVES FOR MOBILIZING SOVIET CENTRAL ASIAN LABOR: OUTMIGR--ETC(U)

NOV 79 S E WIMBUSH, D PONOMAREFF

F49620-77-C-0023

all

UNCLASSIFIED

RAND/R-2476-AF

1 OF 1

AD  
A080852

END  
DATA  
FILMED  
3-80  
R01

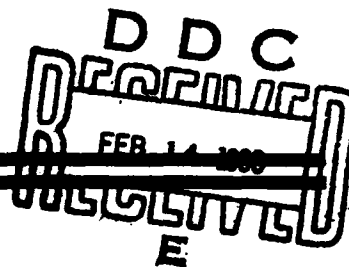
ADA 080852

**LEVEL** *IX*

*12* *5*

R-2476-AF

November 1979



# **Alternatives for Mobilizing Soviet Central Asian Labor: Outmigration and Regional Development**

**S. Enders Wimbush, Dmitry Ponomareff**

**A Project AIR FORCE report  
prepared for the  
United States Air Force**

This document has been approved  
for public release and sale; its  
distribution is unlimited.

**Rand**  
SANTA MONICA, CA. 90406

80 2 14 045

DDC FILE COPY

## UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1 REPORT NUMBER R-2476-AF	2 GOVT ACCESSION NO.	3 RECIPIENT'S CATALOG NUMBER
4 TITLE (and Subtitle) Alternatives for Mobilizing Soviet Central Asian Labor: Outmigration and Regional Development		5 TYPE OF REPORT & PERIOD COVERED Interim
		6 PERFORMING ORG REPORT NUMBER
7 AUTHOR(s) S. E. Wimbush, D. Ponomareff		8 CONTRACT OR GRANT NUMBER(s) F49620-77-C-0023
9 PERFORMING ORGANIZATION NAME AND ADDRESS The Rand Corporation 1700 Main Street Santa Monica, CA 90401		10 PROGRAM ELEMENT PROJECT TASK AREA & WORK UNIT NUMBERS
11 CONTROLLING OFFICE NAME AND ADDRESS Requirements, Programs & Studies Group (AF/RDQM) Ofc, DCS/R&D and Acquisition Hq USAF, Wash. D.C. 20330		12 REPORT DATE November 1979
		13 NUMBER OF PAGES 38
14 MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15 SECURITY CLASS (of this report) UNCLASSIFIED
		15a DECLASSIFICATION/DOWNGRADING SCHEDULE
16 DISTRIBUTION STATEMENT (of this Report)  Approved for Public Release; Distribution Unlimited		
17 DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)  No Restrictions		
18 SUPPLEMENTARY NOTES		
19 KEY WORDS (Continue on reverse side if necessary and identify by block number)  Populations Soviet Central Asia Population Growth Manpower Resources		
20 ABSTRACT (Continue on reverse side if necessary and identify by block number)  See Reverse Side		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

↙

The Soviet leadership is facing increasingly difficult demographic problems, one of which is a sharp imbalance between labor deficits in the European regions and labor surpluses in Central Asia and the Caucasus. This disparity could affect several Soviet policy areas, including growth strategy, leadership perception of resource allocation compromises, and military manpower decisions. Two policy options are discussed in this report--outmigration and regional development. These are available to the Soviet leadership to make better use of Central Asian labor resources, as well as several mobilization strategies that the regime currently uses to this end. The demographic, economic, and political variables underlying the regime's choice of policy alternatives in Soviet Central Asia are examined. It is concluded that outmigration and regional development by themselves or even taken together cannot solve the Soviet labor problem. They should be seen as parts of a larger campaign that must include substantial economic reform. 38 pp. Bibl. (LN).

↘

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

(14) *Notes* / R-2476-AF /  
(11) Nov ~~1978~~ 79 /

(12) *Notes*

# Alternatives for Mobilizing Soviet Central Asian Labor: Outmigration and Regional Development.

(10) *Notes*  
S. Enders/Wimbush Dmitry Ponomareff

(15) *Final Report*  
A Project AIR FORCE report  
prepared for the  
United States Air Force



## PREFACE

This report is one of a series dealing with the role of resource constraints in the future evolution of Soviet military posture. It examines a significant resource constraint now being felt in the USSR, the growing scarcity of labor inputs.

The Soviet leadership is facing increasingly difficult demographic problems, one of which is a sharp imbalance between labor deficits in the European regions and labor surpluses in Central Asia and the Caucasus. This disparity could affect several Soviet policy areas, including growth strategy, leadership perception of resource allocation compromises, and military manpower decisions.

The report discusses two policy options—outmigration and regional development—available to the Soviet leadership in making better use of Central Asian labor resources, as well as several mobilization strategies that the regime currently uses to this end. The demographic, economic, and political variables underlying the regime's choice of policy alternatives in Soviet Central Asia are examined.

This study should be of interest to specialists and intelligence users who analyze Soviet political and economic policy, especially those interested in the evolving Soviet discussion on how to cope with increasingly tight economic constraints. It was prepared under the Project AIR FORCE research project "Soviet Strategic Competitiveness: Constraints and Opportunities."

Accession For	
NTIS GINA	
DOC TAB	
Unannounced	
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avalland/or special
A	

## SUMMARY

Beginning in the 1980s, annual increments to the Soviet labor force as a whole will diminish to a level where Soviet leaders will be hard pressed to fulfill civilian and military manpower demands without important policy reorientations. The problem is not simply one of an insufficient number of workers, a disparity that undoubtedly could be reduced substantially by comprehensive economic reform. Rather, there is an important regional factor. The "European" areas of the USSR have begun to realize significant manpower shortages and, according to demographic projections, are unlikely to be able to fill resulting labor deficits from their own regional reserves. Soviet "Asians," however, are experiencing some of the highest birthrates in the world; these are beginning to result in large labor surpluses within the Central Asian region. In addition to sponsoring other initiatives to improve labor utilization and productivity, Soviet planners have become acutely aware of the need to mobilize Central Asian labor.

Two alternatives have been discussed widely in the Soviet media and among Western specialists—Central Asian migrant workers in the European regions and accelerated regional development in Central Asia. The first alternative assumes that a considerable portion of the labor deficit in the European regions of the USSR can be made up by the migration of Soviet Central Asians to these areas. Western specialists have debated the possibility of such a migration at some length, and the majority of them clearly believe that outmigration of any magnitude is unlikely to occur because Central Asians have strong cultural and economic ties to their native territory. Soviet experts acknowledge these ties but argue that effective economic "pull" conditions can be created in the receiving areas. To accomplish this, they have established a number of Central Asian economic "trusts," which are to serve for specified periods of time in agricultural regions, primarily in the non-black-earth zone (*nechernozem*) of the European USSR. Trusts are mobile labor detachments, which are made up primarily of Central Asian specialists. Their purpose is to regenerate agricultural production through land reclamation and irrigation. Historically, the non-black-earth zone of Russia consisted of the core of the Moscovite state, the region surrounding Moscow and Novgorod, plus the Murmansk region and some contiguous territories east of the Urals. Cultural facilities like those in Central Asia have been designed to appeal to these internal *gastarbeiter*.

In theory, at least, the arrival of Central Asian agricultural specialists and workers in the Russian Republic (RSFSR) frees Russians and other "Europeans" to work in Soviet cities, although the regime has made it clear that it wishes to retain as many workers as possible in the non-black-earth zone at least for the present.

The impetus for accelerating the regional development of Central Asia comes from three directions: central planners seek to take advantage of Central Asian labor surpluses at their source; policymakers want to augment foreign currency earnings through larger exports of Central Asia's principal cash crop, cotton; and Central Asian native leaders seek to increase the pace of development for their societies. Actual development has come in surges. Currently it is beset by a number of vexing problems, such as how to encourage small-town development as an intermediate step to achieving significant rural-urban migration; how far cotton production should be mechanized in the context of large rural labor surpluses; and how to increase the agricultural and industrial productivity of Central Asia without substantial investment in very expensive irrigation projects. Such investment necessarily depletes funds for other priority development goals.

To date, Russian leaders have deferred plans to increase Central Asian irrigation, which would involve rerouting several northern rivers to the southern regions of the USSR. At the

same time, Central Asian leaders are encouraging the outmigration of native "trusts" to work in the RSFSR, possibly as an incentive or an implied *quid pro quo* to Russian leaders to make this crucial investment decision. At issue are investment priorities. The marked slowdown in the Soviet economy has intensified the competition for the nondefense ruble among advocates of different developmental strategies. Implicit, and occasionally explicit, in these different approaches are the nationalistic preferences of the advocates.

The Central Asian "trust" arrangement probably is a pilot program that will require considerably more time and investment before living and working conditions are sufficiently amenable in the RSFSR to induce large numbers of Central Asians to participate in this experiment. Nor has regional development been adopted on a large enough scale to suggest that the regime is content to invest heavily in a region that could become politically restive as demographic trends progress. In any case, that region lies immediately in the path of any invading Chinese army. The Brezhnev regime has thus far indicated its unwillingness to adopt a comprehensive position on either of these two alternatives, just as it has failed to address the issue of economic reform, about which the regime has not talked systematically, and to which it has made no apparent commitment. These decisions will be left to the next generation of Soviet leaders; therefore, the deteriorating labor situation will be improved only marginally, if at all, by more effective use of Central Asian labor. For a map of the USSR administrative division, see Fig. 1.



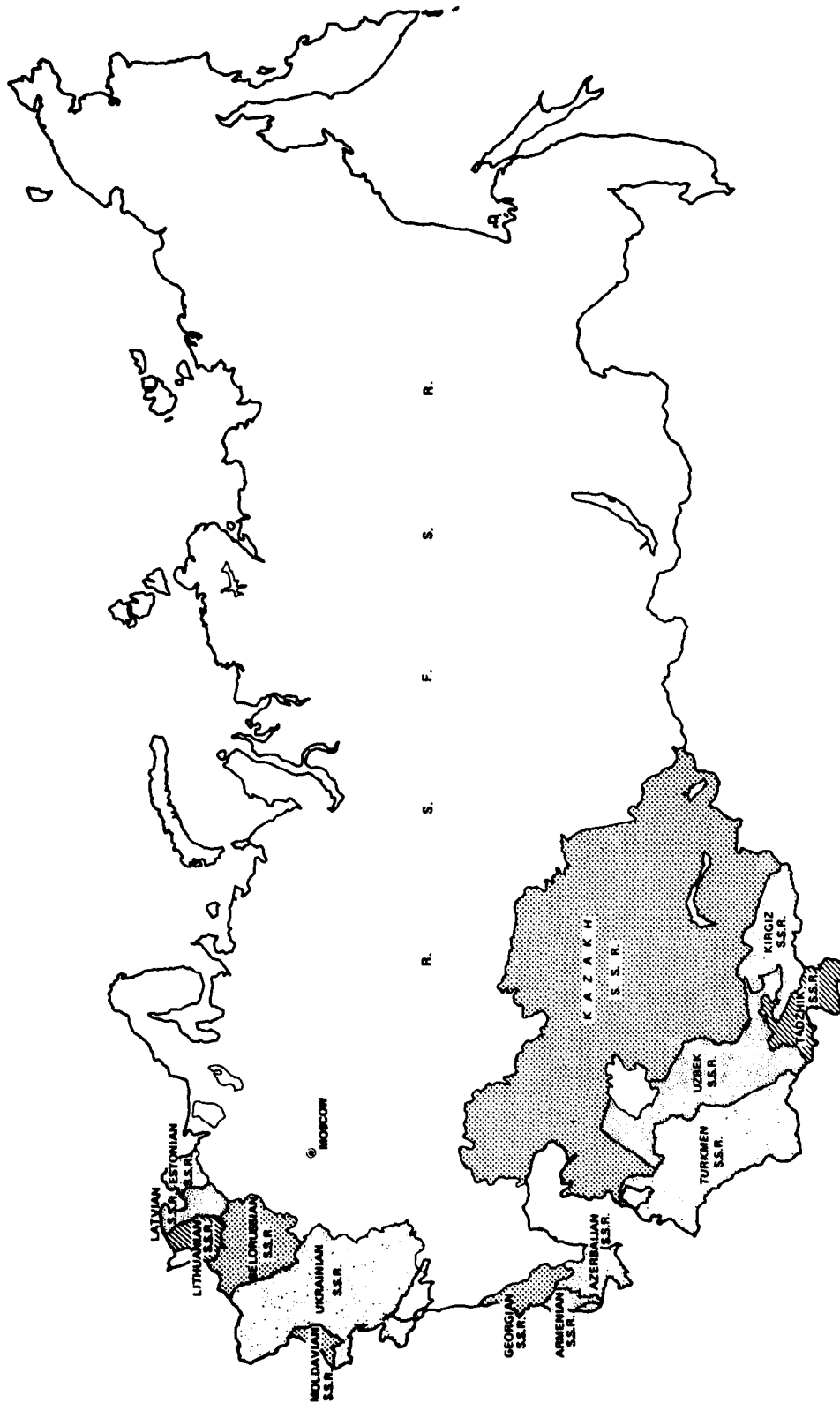


Fig. 1—USSR administrative divisions

## ACKNOWLEDGMENTS

From the Rand community, we wish to acknowledge Marie Hoepfner's patient, imaginative, and extensive analytical assistance during the early stages of this project. Nancy Nimitz graciously read and reread the draft and provided many comments and suggestions. A. Ross Johnson and Thane Gustafson sharpened our thinking on important issues. Finally, we would be remiss were we to fail to thank Abraham Becker, who managed the project, for his continuous encouragement, intellectual prodding, and unfailing good humor.

PRECEDING PAGE BLANK - NOT FILMED

## CONTENTS

PREFACE .....	iii
SUMMARY .....	v
ACKNOWLEDGMENTS .....	ix
Section	
I. INTRODUCTION .....	1
II. THE CASE FOR OUTMIGRATION AND ITS IMPLICATIONS .....	7
The Case For Massive Outmigration .....	8
The Case Against Massive Outmigration .....	9
The Soviet Official View .....	11
An Alternative Hypothesis .....	12
III. THE CASE FOR REGIONAL DEVELOPMENT AND ITS IMPLICATIONS .....	20
Problems of Uneven Regional Development .....	20
The Impetus for Regional Development .....	21
Prospects for Small-Town Development .....	23
The Paradox of Agricultural Mechanization .....	24
The Politics of Water .....	26
IV. CONCLUSIONS .....	30
BIBLIOGRAPHY .....	33

## FIGURES

1. USSR Administrative Divisions .....	vii
2. Regional Age Structure, 1980-2000 .....	3
3. Russian Non-black-earth Zone (Nechernozem) .....	15

## TABLES

1. Differential Annual Growth Rates of Major Soviet European and Asian Nationalities, 1959-1979 .....	2
2. Estimated Increments to the Working Age Population in the USSR and Central Asia and Kazakhstan, 1959-2000 .....	4
3. Per Capita Regional Lag in National Income and Industrial Production .....	10
5. National Populations Located Outside of Central Asia, 1959 and 1970 ...	10

## I. INTRODUCTION

Beginning in the 1980s, annual increments to the labor force of the USSR as a whole will diminish to a level where Soviet leaders will be unable to fulfill expected civilian and military manpower demands without important policy reorientations. Two trends account for this decline. First, the number of new entrants to the labor force will be significantly lower than in the preceding decades.<sup>1</sup> Second, the number of workers who reach retirement age will increase. The following figures capture the magnitude of this change: Increments to the working age population, which averaged 2.5 million per year during 1971-75, will decline to 1.6 million annually by 1980, thence to an average of less than 0.5 million per year by the mid-1980s;<sup>2</sup> in addition, the number of retirement age workers—10.4 percent of the population in 1950—will rise to 19.2 percent by the end of the century.<sup>3</sup>

This decline in the number of new entrants to the labor force results from several interrelated factors. First, the annual average rate of population growth of the total Soviet population is expected to drop from 1.7 percent in 1951-1955 to 0.6 percent in 1990-2000, thereby reducing the absolute size of the annual increment to the population to about one half of its peak of the 1950s. This drop is caused, in part, by the large number of potential fathers who were killed during World War II. Second, postwar reconstruction, combined with further industrialization and rapid urbanization, required the absorption into the labor force of many young women 20-29 years old—the prime fertility age—thereby reducing their opportunities and incentives for raising children. Finally, fundamental social changes, especially urbanization, exacerbated the shortage of basic social services provided by the Soviet state, particularly housing; these inadequacies have been disincentives to the formation of large families.

The manpower picture is rendered more complicated by the differences in annual average rate of population growth in the various ethnic regions of the USSR. Slowing trends are most evident and most predictable among the European populations: Russians, Ukrainians, Belorussians, and Baltic peoples. The opposite trend is evident in the Asian ethnic territories, primarily among the Turkic and Iranian Muslim populations of Kazakhstan, Central Asia (Uzbekistan, Tadzhikistan, Kirgizia, and Turkmenistan), and Azerbaidzhan. Table 1 illustrates the differential annual population growth rates of major Soviet European and Asian nationalities for the 1959-1970 intercensal period.

The difference in reproduction rates between European and Asian regions of the USSR has important implications for present and future manpower resources. Specifically, the resulting change in age structure means that fewer Europeans will be entering the labor force because of the shrinking birthrate, and proportionally more Europeans will be retiring from the labor force than has been the case. Consequently, if the size of the total labor force is to remain at approximately its present level, then an increasingly greater increment will have to come from the younger Asian regions. See Fig. 2.

In 1980, increases in the overall population come more from Central Asian fertility patterns than from European, which, although increasing slightly between 1965 and 1975, do not

<sup>1</sup>The generally accepted age range for active labor force participation is 16 to 60 for men and 16 to 55 for women. A prominent Soviet demographer recently argued against using this formula automatically for assessing Soviet labor force strength, however. According to him, 16 is a formal rather than an actual baseline for entering the labor force, as universal secondary education keeps most young people in school until 17 or 17½ years of age; others go to school for more than ten years; and a substantially larger group of young people are receiving higher education. Many women in the 55 to 59 year age range and many men 60 to 64 continue to work. Therefore, he concludes, a more appropriate working age range would be 20 to 60 for the population as a whole. Perevedentsev, 1978.

<sup>2</sup>Central Intelligence Agency, 1977.

<sup>3</sup>Feinbach and Rapawy, 1976.

Table 1  
DIFFERENTIAL ANNUAL GROWTH RATES OF  
MAJOR SOVIET EUROPEAN AND ASIAN  
NATIONALITIES, 1959-1979  
(In percent)

Europeans		Asians	
Russians	1.12	Tadzhiks	3.94
Ukrainians	0.82	Uzbeks	3.90
Belorussians	1.23	Turkmen	3.89
Lithuanians	1.24	Kirgiz	3.75
Latvians	0.19	Azerbaidzhanis	3.69
Estonians	0.63	Kazakhs	3.52

SOURCE: Azrael, 1977.

match the increase in the population between 1960 and 1965, leaving an overall picture of declining European fertility and an aging population. In contrast, Central Asian fertility patterns are constant, and the population composition approximates the typical "Christmas tree" configuration, indicating a young population.

In 1990, the picture is sharper, with gains to the overall population coming from Central Asia, while European fertility declines. Barring a drastic increase in European birthrates, future gains in European manpower should be gradual at best.

Available evidence suggests that these trends will continue. A recent Soviet study on the differential birthrates by ethnic group indicates great disparity in the expected number of children between Soviet women of European and Asian backgrounds. For example, 89.8 percent of Russian women of childbearing age expected to have no more than two children, and only 1 percent expects to bear six or more. In contrast, only 8.1 percent of Uzbek women of childbearing age expect to bear no more than two children; a majority, 58.8 percent, expect to bear six children or more. The same expectations pertain for Tadzhik, Turkmen, and Kirgiz women.<sup>4</sup>

Projections indicate that increments to the labor force from Central Asia and Kazakhstan will outpace the increment for the USSR as a whole. In fact, the labor force in the major European areas—the RSFSR and the Ukraine—will experience an absolute decline beginning in 1980, and the Baltic states will follow suit after 1990 (see Table 2).<sup>5</sup>

As some Western analysts already have noted, these regional shifts in the location of current and future manpower increments foreshadow changes in the structure of Soviet military and nonmilitary institutions, regardless of what measures Soviet leaders take to reverse these trends. Simply, these shifts are inherent in the existing population, and any alterations to the ethnic composition of the total labor force can occur only after a generation and only if the Soviet leadership is capable of influencing birthrates now. The regime's ability to make large-scale and rapid changes to existing fertility rates in the USSR is problematic. Indeed, the debate among academics over a proper demographic policy is still far from being resolved, and the leadership has shown little inclination to act upon existing proposals. Therefore, it is safe to say that demographic trends will cause Central Asia and Kazakhstan to have a large surplus labor supply for at least the next three decades. It is unlikely that the Soviet leadership can avoid policy choices on labor resources that are bound up closely with this region.

Other possible means of alleviating the European labor shortage are suggested by current Soviet policies. For example, some foreign workers—primarily Bulgarians, Poles, and Finns—have been imported for work on special projects, but the number of such *gastarbeiter* is still

<sup>4</sup>Belova et al., 1977.

<sup>5</sup>Feshbach and Rapawy, 1976, p. 128.

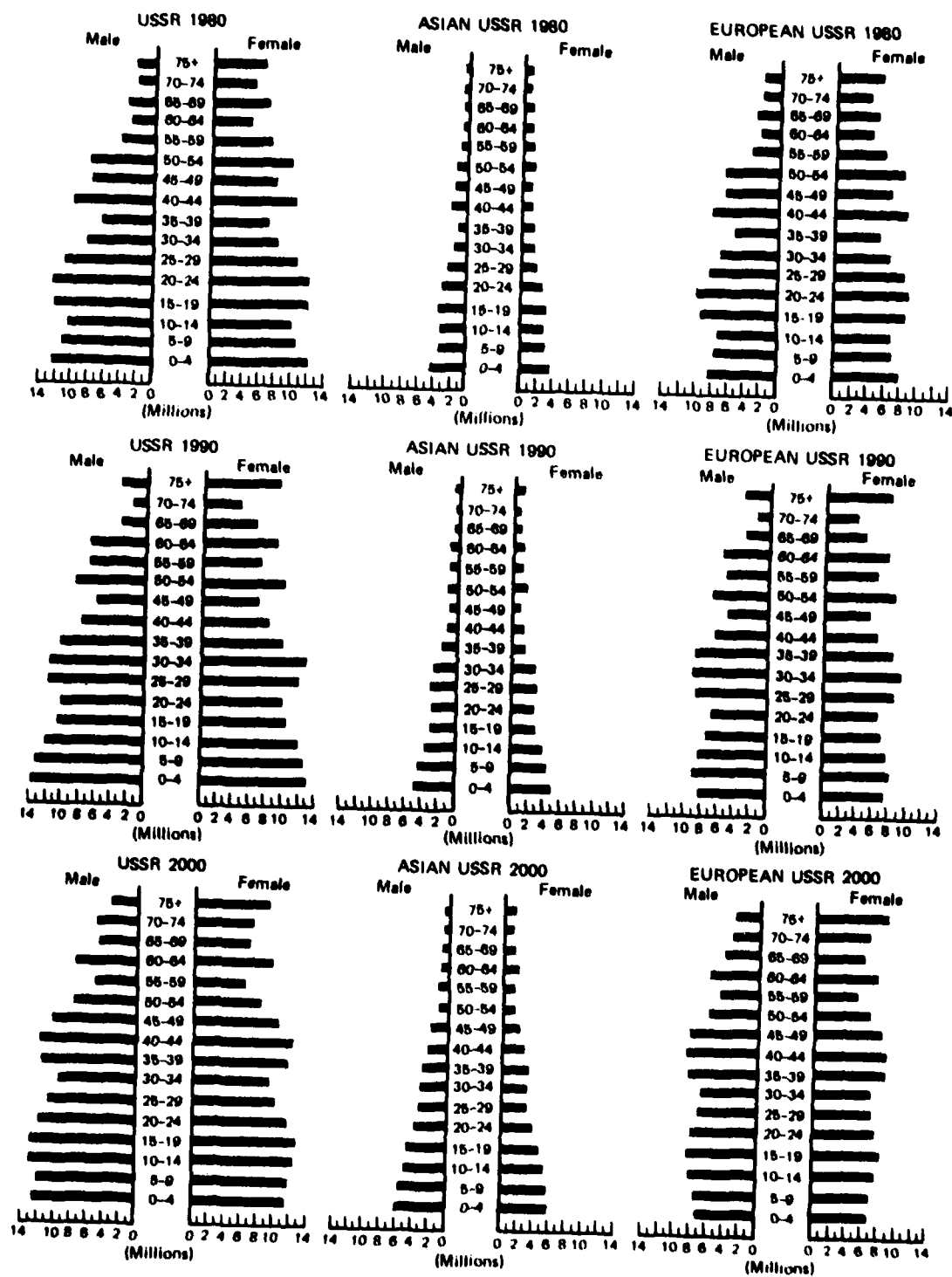


Fig. 2: Regional age structure, 1980-2000

Table 2  
ESTIMATED INCREMENTS TO THE WORKING AGE POPULATION  
IN THE USSR AND CENTRAL ASIA AND KAZAKHSTAN, 1959-2000

Year	USSR		Central Asia and Kazakhstan	
	Total Increase	Average Annual Increase	Total Increase	As Percent of National Increase
1959-65	5,173	739	n.a.	--
1966-70	7,808	1,562	n.a.	--
1971-75	12,726	2,545	3,551	27.9
1976-80	10,408	2,082	3,495	33.6
1981-85	2,687	537	2,823	105.1
1986-90	2,830	566	2,938	103.8
1991-95	4,020	804	3,565	88.7
1996-2000	9,012	1,802	4,999	55.5

SOURCE: Feahbach and Rapawy, 1976, p. 129.

so small, perhaps as few as twenty thousand, as to indicate that the Soviet leadership does not yet view this as an acceptable alternative. The regime has accelerated the entry of many workers to the labor force by restricting access to institutions of higher education and by expanding the possibilities for technical training.<sup>6</sup> An alternative about which the regime is significantly more serious concerns increasing labor productivity. The degree of the regime's commitment to increased labor productivity is evident from the massive attention the subject has received in the media and in party meetings at all levels. There is a broad spectrum of opinion among Western specialists regarding the likelihood that the Soviet leadership will be willing to institute the major economic reforms necessary to raise labor productivity, ranging from those who believe that any major reforms will be regime-threatening and therefore unacceptable, to those who credit the Soviet system with more flexibility and management level personnel and economic planners with more decisionmaking authority than is generally thought to be the case. However, nearly all concede that economic reform can come only gradually and that nontrivial reforms are more probable in times of acute economic crisis, such as is predicted for the USSR in the early 1980s. One cannot dismiss the possibility of long-range economic reform; however, in the absence of immediate economic setbacks, efforts to engage the existing labor pool in Central Asia more fully in production may be more attractive to Soviet leaders than far-reaching economic reforms they might not be able to control.

Yet another possible solution to the labor shortage is to tap the Soviet military for some of its existing and planned manpower reserves; but this method, too, requires important concessions. The current (1979) 2.6 million cohort of draft age males (18 years old) in the total Soviet population will decline to approximately 2.0 million by the mid-1980s.<sup>7</sup> Therefore, keeping the military at current levels can be achieved only by further reducing the already diminishing increment of new workers to the labor force or by lengthening the term of conscript service to achieve a one-time gain. Conversely, enlarging the increment of new workers can be achieved only by reducing the annual military call-up at the expense of the absolute size of the military. Moreover, the proportion of non-Europeans—primarily Central Asians—in the draft pool will rise from a low of 20 to 25 percent in the 1980s to nearly 40

<sup>6</sup>In 1960, 56 percent of secondary school graduates were permitted to go on for higher education. By 1975, only 26 percent were permitted to do so. Shuruev, 1978.

<sup>7</sup>Feahbach and Rapawy, 1976, p. 150.

percent by the year 2000, thereby accelerating what Russians privately refer to as the "yellowing" of the armed forces.<sup>8</sup>

To the detriment of military efficiency, Central Asians will bring with them inferior education, few developed technical skills, and a poor command of Russian. In terms of military effectiveness, such a development could cast considerable doubt on the ability of these recruits to use complex weaponry or to "absorb" the technological refinements necessary to ensure success on the battlefield. When seen against a background of a conceivably high level of ethnic dissent between Central Asian and European soldiers, such a combination of factors could persuade the Soviet high command to avoid using such troops in combat where possible, as reportedly was the case during World War II.<sup>9</sup> Of course, the educational level and technical skills of Central Asian conscripts can be raised through training. Indeed, the military itself can serve as a vehicle for imparting technological education and raising linguistic skills.<sup>10</sup> However, a training program designed to raise the educational level of Central Asians to that of their Slavic counterparts would be an expensive proposition, requiring large outlays for language teachers, bilingual technical instructors, and the supporting educational materials; it is doubtful that the normal two or three year conscription period will be sufficient for such an ambitious undertaking. Furthermore, it is uncertain that such a large-scale training program could either reduce ethnic tensions in the Soviet military or make the Central Asian recruits more reliable from the standpoint of the regime. Therefore, for reasons of military efficiency, internal control, and operational flexibility, the Soviet leadership should adopt policies that will ensure a continued supply of reliable and skilled manpower—meaning primarily Russians and other Slavs—to their armed forces.

Table 3  
PER CAPITA REGIONAL LAG IN NATIONAL INCOME  
AND INDUSTRIAL PRODUCTION  
(Percent below Soviet national average)

Area	National Income			Industrial Production		
	1960	1970	1975	1960	1970	1975
Uzbekistan	33	47	49	50	64	65
Kazakhstan	26	29	38	44	44	46
Kirgizia	35	40	47	49	41	41
Tadzhikistan	45	53	57	52	60	65
Turkmenistan	26	49	55	53	65	66

SOURCE: Compiled by the Foreign Demographic Analysis Division, Bureau of the Census, U.S. Department of Commerce, Washington, D.C., 1977.

In addition to being faced with a problem of supplying manpower to both military and civilian enterprises, Soviet leaders are concerned with the growing numbers of unemployed and underemployed Central Asians, mainly in rural areas. Central Asia always has lagged behind the other areas of the USSR in terms of per capita income and per capita production (Table 3), but these apparent deprivations have been balanced in the eyes of most Central Asians by a fairly homogeneous ethnic environment, powerful religio-cultural influences, a warm climate, and a productive private agricultural sector. Yet, the continued quiescence of these peoples is something the Soviet leadership cannot take for granted. Recent large-scale demonstrations—including one involving as many as 13,000 people in Dushanbe, which was put down by Russian troops—have underlined the willingness of many Central Asians to

<sup>8</sup>Asrael, 1978, p. 372.

<sup>9</sup>Personal communication to the authors by a former high ranking officer in the Soviet Army.

<sup>10</sup>See, for example, Winter, 1978.



protest policies they deem unfair or exploitative.<sup>11</sup> Native political and cultural figures have begun to exercise considerably more muscle in local affairs than was the case only a decade ago.<sup>12</sup> Contacts with other Muslim countries have provided new reference points by which both elites and masses will be able to judge the course of Central Asian development.<sup>13</sup> Furthermore, Soviet leaders must be concerned with the infection potential of resurgent conservative Islamic movements in Iran, Iraq, Pakistan, and the Middle East generally on their own Muslim republics.<sup>14</sup> The Chinese have stepped up their propagandizing along the Central Asian border in an attempt to heighten the level of discontent among Soviet Central Asians.<sup>15</sup> Finally, official developmental strategies, such as rapid agricultural mechanization, threaten to aggravate existing rural employment problems. These factors, on top of a high birthrate, mean that labor redundancy must concern Soviet leaders not only in terms of the possibility of alleviating shortages elsewhere, but also for its conflict potential.

Two other prospective schemes for alleviating this unfavorable labor picture have been receiving considerable attention in the Soviet Party and government press and in academic journals. They appear to be an opportunity to mobilize Central Asian labor extensively, thereby freeing more Russians and other Slavs for technologically demanding and politically sensitive jobs in the civilian and military sectors. These two alternatives, their operational feasibility, and their political and economic ramifications are the subject of this report. The first concerns the possibility that large numbers of redundant or underemployed Central Asians can be induced to migrate out of their national territories through a combination of push and pull factors to serve in the labor-deficit areas of the European USSR (mainly in the RSFSR) and in the chronically labor-short development of Siberia. The second possibility is for the relocation of certain existing industries and the development of new ones in labor-rich Central Asia and Kazakhstan. This would allow fuller use of local labor supplies, and it could eliminate a potential source of labor unrest in crucial border regions, leading, perhaps, to a more nationalistic dissent.

Neither alternative is a panacea for Soviet planners, for both require important sacrifices. However, either alternative, if successful, could contribute significantly toward easing the Soviet labor squeeze of the 1980s and 1990s.

<sup>11</sup>For example, see *The Jerusalem Post*, 15 September 1978.

<sup>12</sup>For a good description of the ways in which Central Asian native elites have begun to be more assertive, see Critchlow, 1972, pp. 18-28; Burg, 1979, pp. 41-59; Rakowska-Harmatone, 1974; and Carrère d'Encausse, 1978; Sheehy, 1972b.

<sup>13</sup>LeCompte, 1971.

<sup>14</sup>There is strong evidence that Islam in the USSR has survived the official anti-religious onslaught very much intact, if not strengthened. See, for example, Bennigsen and Wimbush, 1974; Bennigsen, 1978. See also the recent series by Kevin Kloos on Soviet Muslims, *Washington Post*, 30 December 1978, 1-2 January 1979. For a historical account of the regime's efforts to penetrate Central Asian Muslim society, see Massell, 1974; and Bennigsen and Quelquejay, 1967.

<sup>15</sup>Radio broadcasts aimed in both directions have been a feature of Sino-Soviet border relations for several decades. Until the last few years, it was widely assumed that the Soviets were winning this phase of the rivalry, and several large emigrations of non-Han Chinese to the Soviet Union in the 1960s supported this view. In a private communication to one of the authors, an Eastern European diplomat with considerable experience in China argued that this is no longer the case. According to him, there is heightened restiveness among the minorities on the Soviet side of the border, and sophisticated Chinese propaganda has been able to exploit it successfully.

## II. THE CASE FOR OUTMIGRATION AND ITS IMPLICATIONS

It is not enough simply to say that Central Asia has an available labor surplus. In the cities, where one would expect to find the best trained and most easily mobilizable labor force, there are, for the most part, only shortages. A prominent Soviet demographer notes, for example, that in 1976 a large cotton textile mill in Dushanbe, the capital of Soviet Tadzhikistan, had 1300 vacancies in an 8000-person complement.<sup>1</sup> This would appear to be a recurrent pattern throughout Central Asia.

Rural Central Asia, however, is rich in manpower; and, as the labor deficit in cities of this region suggests, workers - mainly agricultural laborers - have demonstrated little interest in migrating to cities within their own republics let alone cities in other parts of the USSR.<sup>2</sup> In fact, in the European USSR, "the rural population is moving out of mainly those areas where labor resources are inadequate and where the age and sex structure is highly unfavorable. Areas with abundant labor resources, *that is, rural Central Asia*, are significantly more stable."<sup>3</sup> Although in absolute numbers the rural populations of the republics of the European USSR declined consistently from 1940 to 1974 (except in Moldavia, where an absolute decline is more recent), the rural population of Central Asia and Kazakhstan has continued to grow in absolute terms.<sup>4</sup>

If the surplus labor currently located in rural Central Asia could be encouraged somehow to migrate out of that region to where labor deficits threaten to disrupt existing and planned production - namely, to the RSFSR or Siberia - then, in theory at least, the Soviet leadership would be able to claim important successes. First, required labor reserves would have been moved to regions where they are in great demand. Second, the influx of Central Asians to fill manual or semi-skilled positions would allow important industries and the Soviet military establishment to continue to fill their own labor quotas in large part from the more educated and more acculturated Soviet European population. Third, competition between the civilian and military sectors for scarce labor resources would be substantially eased. Fourth, massive outmigration would eliminate to a considerable degree the need for Central Asian regional development, which would involve high costs. Finally, outmigration could relieve high unemployment and underemployment in Central Asia, which could otherwise result in social unrest.<sup>5</sup>

In addition, outmigration might speed what the leadership considers to be other "positive" processes. Central Asians who migrate to other parts of the USSR would be divorced physically from their strong Muslim culture and, therefore, become more prone to assimilation by other nationalities, mainly the dominant Russians. More frequent contacts between Central Asians and Russians, which would appear to be the logical outcome of any outmigration scenario, should force more Central Asians to learn and use the Russian language, a well-known and consistent regime goal. Life in a more urban, more industrial environment would provide opportunities for poorly educated Central Asians to learn new skills and to

<sup>1</sup>Perevalentsev, 1976, p. 10. See also *Kommunisticheskii Tadjikistan*, February 1970, pp. 9-13, and *Pravda*, June 1, 1978, and January 29, 1973.

<sup>2</sup>Khorev, 1973, p. 12.

<sup>3</sup>Perevalentsev, 1974.

<sup>4</sup>*Narodnoe khozaystvo SSSR v g. 1977*, pp. 10-11, see also Shabad, 1978, for a discussion of gains to the rural populations of Kirgizia and Tadzhikistan through net immigration.

<sup>5</sup>For example, see "Breshnev Troubled by 'Labour Resources,'" *Soviet Analyst*, Vol. 8, No. 23, 11 November 1976, pp. 6-8.

acquire more education. Finally, the rapid urbanization of Central Asians—whether in the European USSR or elsewhere—could reduce the high Central Asian birthrate, thereby alleviating one of the leadership's more severe headaches.

The feasibility of a massive Central Asian outmigration has been debated at some length in the Western academic and policy community. There is strong disagreement. Some believe that outmigration is possible and others reject the notion.

### THE CASE FOR MASSIVE OUTMIGRATION

Those who believe that outmigration on a massive scale is feasible, indeed inevitable, argue that the treatment of Soviet nationality issues should be

based on universal experience. Implicit in this approach . . . is the underlying assumption that socioeconomic, demographic, and ethnic processes in the Soviet Union are fundamentally very similar to those same processes in all multinational states, Soviet propaganda and some Western scholarship notwithstanding.<sup>6</sup>

According to this argument, Soviet Central Asians are experiencing "population pressures," mainly in the countryside, where birthrates are high, where the mechanization of agriculture has contributed to a large surplus labor force, income per collective farm member is below the national average, and even if irrigated land could be enlarged significantly, it would be insufficient to absorb the rapid population growth. Proponents of this view rule out more birth control as an effective means of checking Central Asian population growth; likewise, they rule out the possibility of changing the Central Asian agricultural system to promote more labor-intensive crops and methods. Bolstering this argument with evidence that per capita income and per capita production among Central Asians increasingly lags behind the national average (Table 3), these specialists see rural outmigration as "the most immediate and far-reaching response" to these conditions. They emphasize that "this response would not be novel in that most peoples of the world have generally responded in the same manner when confronted with relatively deteriorating rural living standards."<sup>7</sup>

By this reasoning, there are two logical hypothetical alternative destinations for Central Asian migrants: local and distant urban centers.<sup>8</sup> Its proponents argue that local urban centers are less attractive for many reasons: Industrial investment there has lagged relative to other areas of the USSR, as has housing investment. "Of the entire 15 republics, the six republics that are based on Turkic-Muslim nationality had the six lowest values of per capita useful urban housing space." Furthermore, they argue, the nonagricultural sector will be unable to absorb the large influx of rural laborers. Those who do settle in Central Asian cities will be at a competitive disadvantage with immigrant Europeans because of their underdeveloped technical skills, lower educational level, and poor command of the Russian language (although proponents of this view fail to point out that rural migrants never compete for skilled positions). Finally, they argue, Central Asian cities have a certain Russian ambience that natives will find objectionable (although they fail to explain in what ways the ambience of large European cities would be less so). On this basis, they conclude:

Therefore, although an increase in local rural-urban migration will most likely occur, it does not appear that Central Asian cities will be able to accommodate completely the projected mass outflow of indigenous peoples from nearby rural areas. Thus, it

<sup>6</sup>Lewis, Rowland, and Clem, 1976, p. 343.

<sup>7</sup>Ibid., p. 358.

<sup>8</sup>Ibid., p. 363.

appears that about the only reasonable alternative available to a substantial number of these peoples will be migration to cities of other areas.<sup>9</sup>

## THE CASE AGAINST MASSIVE OUTMIGRATION

A number of specialists of Central Asian affairs, perhaps the majority, have raised many objections to the probability, and even stronger ones to the "inevitability," of massive outmigration as outlined above.<sup>10</sup> Summarized briefly, the objections of these specialists are as follows: Although Central Asia is experiencing "population pressures" in the rural areas, it is not necessarily true that Central Asians will follow a "universal" pattern and migrate out of their regions to more rewarding environments elsewhere. Specialists who hold this view argue that the push factors cited by the proponents of outmigration are misleading. According to a recent study, although regional per capita income for the Central Asian republics has lagged in recent years on the whole, Central Asian collective farm workers have a larger total income (wages from the socialized sector, income from private plots, aid from social consumption funds, and income from work in state enterprises) than collective farm workers in other areas of the USSR.<sup>11</sup> Despite rural underemployment and unemployment, supplemental income—mainly private plot farming and social welfare benefits—provide a reasonable standard of living. Moreover, living costs typically are lower in Central Asia than in other parts of the USSR, particularly in Siberia and the Far East.<sup>12</sup> The greater availability of many food staples, such as fruits, vegetables, and meat, than in Moscow or other European Soviet cities also is an important incentive for natives to remain in Central Asia, as many travelers can attest.

The skeptics of outmigration view cultural factors as another major disincentive. Most of Central Asian society, they note, particularly in the rural areas, remains highly traditional. For the most part, they are Turkic or Iranic Muslims. Islam is a religious, cultural, and, increasingly, a national identity system.<sup>13</sup> Its tenets and traditions are widely practiced in everyday life, despite the regime's campaign to close the mosques and clean up what are euphemistically referred to as "survivals of the past."<sup>14</sup> Moreover, Central Asians take from the Turkic-Mongol tradition the concept of the *ulus*, which translates into land, state, and nation simultaneously. "Motherland" for a Turk is where he can live among a Turkic majority. Thus, he is likely to move when his entire community moves (according to the notion, a Turkic people takes its land with it, the new location becoming the *ulus*); without his community, the Turk is unlikely to migrate.<sup>15</sup> Proponents of this view also note the widespread use of the Russian language in cities outside of Central Asia as a disincentive to migrate, and they cite as evidence the scarcity of native workers in Central Asian cities as evidence of this aversion.<sup>16</sup> They note that the renewed attention by native political and cultural leaders to the Central Asian cultural heritage, to the regional economic and political strength of Central Asia, and to the intensified contacts with Muslims abroad have led to

<sup>9</sup>Ibid., pp. 363, 369.

<sup>10</sup>The leading proponent of this view is Fishbach, 1977.

<sup>11</sup>Schneider, 1974.

<sup>12</sup>Kapustin and Kusnetsova, 1972.

<sup>13</sup>Bennigsen, 1978.

<sup>14</sup>Bennigsen and Wimbush, 1974.

<sup>15</sup>For a discussion of the *ulus* principle in the Soviet context, see Wimbush, 1979.

<sup>16</sup>In fact, between 1969 and 1970 (census years) among Uzbek, Tadzhik, Kirgiz, and Turkmen the proportion of natives claiming their native tongue as a first language, instead of Russian, rose; the number of Kazakh claiming Kazakh as a first language remained about the same, despite large immigrations of Russians and other Slavs to that republic. *Itogi nauki i tekhnologii* 1970 goda, Vol. 4.

purely nationalist manifestations of the kind that will probably tie upwardly mobile natives more closely to their national polities.

Those who argue against massive outmigration buttress their argument with data from the 1970 Soviet census. For instance, the tendency of the major Central Asian nationalities to remain within their own territorial boundaries might be interpreted as becoming stronger, not weaker (see Table 4).

The increases shown in Table 4 do not represent simply the higher birthrates of those natives who chose to stay behind. Table 5 indicates the real reluctance of Central Asians to move very far. Given the centuries-long ethnic interpenetration of Central Asia, it is not unusual to find Uzbeks or Tadzhiks living in the other's republic—that is, among Muslim compatriots. The absence of large numbers of Central Asians living outside their nominal territories—and even fewer outside of Central Asia as a whole—underlines the scope of the problem facing Soviet planners who see outmigration as an alternative.

Another demographic variable that is often cited as proof of the unlikelihood of outmigration to urban areas is the infrequency of Central Asian rural-urban movement generally. Urbanization in the Soviet context is the product of three components: the natural increase in the size of the urban population, net migration to cities, and the reclassification of formerly rural areas to urban, based upon the presence of industry. For example, analysis of these factors for Uzbekistan, the most highly developed of the Central Asian republics, indicates that for an urban population growth of nearly 1,600,000 during the 1959-1970 intercensal period, urban natural increase accounted for 52 percent, reclassification for 16 percent, and net immigration for 32 percent. All but 10 percent of this immigration to Uzbek urban areas originated outside of Uzbekistan, however. In Tadzhikistan and Kirgizia, net immigration from outside the republics actually exceeded rural-urban movement within the republics. The

Table 4  
PERCENTAGE OF GIVEN  
NATIONALITIES WITHIN THEIR  
TITULAR REPUBLICS

Nationality	1959	1970
Uzbeks	83.8	84.0
Kazakhs	77.2	79.9
Kirgiz	86.4	88.5
Tadzhiks	75.2	76.3
Turkmen	92.2	92.9

SOURCE: *Itogi vsesoiuznoi perepisi naseleniia 1970 goda*, Vol. 4, pp. 9-15.

Table 5  
NATIONAL POPULATIONS LOCATED OUTSIDE OF  
CENTRAL ASIA, 1959 AND 1970<sup>a</sup>

Nationality	Number		% of Nationality	
	1959	1970	1959	1970
Uzbeks	29,512	76,240	0.5	0.83
Kazakhs	382,431	489,519	10.6	9.2
Kirgiz	4,701	11,454	0.5	0.79
Tadzhiks	7,027	18,243	0.5	0.85
Turkmen	11,631	22,883	1.2	1.5

SOURCE: *Itogi vsesoiuznoi perepisi naseleniia 1970 goda*. Vol. 4, pp. 9-15.

result was that the rural areas of these republics actually gained some population through rural immigration.<sup>17</sup>

### THE SOVIET OFFICIAL VIEW

Soviet planners have shown themselves to be acutely aware of the impending labor squeeze and of the important part Central Asian labor could play in eliminating the problem, and they have called for more "rational demographic politics," for realizing "the demographic optimum," and for a more equitable "regional balance of labor resources."<sup>18</sup> As a result of the official attention being paid to unequal birthrates in the European and Asian parts of the USSR, a lively (and still unresolved) debate has sprung up over the feasibility of a differentiated demographic policy aimed at bringing down the runaway birthrates of Central Asians and raising those of Russians and other Slavs.<sup>19</sup> However, at least one realist has cautioned "that a 30-year period should be considered as the historically shortest time to achieve the results of demographic policies".<sup>20</sup> For this reason, outmigration for many central planners has become an attractive, although difficult to realize, possibility.

Most Soviet demographers have lamented the unwillingness of Central Asians to migrate to cities within their own republics, to outside cities, or to Siberian developments, comparing them unfavorably with the highly mobile Soviet Slavic population.<sup>21</sup> The three main reasons for this reluctance to migrate are thought to be the low level of education among Central Asians; the absence of cultural, social, and material amenities—mainly suitable housing—in areas needing more labor; and considerable native satisfaction with the cultural, social, and even material ambiance of their present environment, regardless of the economic indicators that would suggest (to Russians and other non-Russians) their deprivation. Soviet sociological research has revealed that more educated individuals move more frequently because they possess marketable skills and have a basic knowledge of the new place of residence before migration, an awareness, they imply, lacking among Central Asians.<sup>22</sup>

Somewhat reluctantly, most Soviet demographers have come to acknowledge that "cul-

<sup>17</sup>Shabad, 1978.

<sup>18</sup>For recent statements, see "Osnovnye problemy kompleksnogo razvitiia Zapadnoi Sibiri," *Voprosy filosofii*, No. 7, July 1978, p. 156; Kvasha, 1978; Churakov, 1977; and (review of above) Dadashev and Kryukov, 1978.

<sup>19</sup>Although the issue of demographic policy is a sensitive one, it has been discussed with increasing frequency in the public media, suggesting that it is now acceptable to the leadership as a subject on which contending views can be expressed within officially prescribed limits. This freedom of discussion probably is due in part to the recent rebirth of the sciences of demography and the sociology of labor, and in part to the Soviet leadership's concern that a solution to the demographic problem be found. The discussion of these issues would have been impossible under Khrushchev because the leaders themselves would not have had the necessary facts. For a good overview of this discussion, see Heer, 1977. For the most current refutation of a differentiated population policy, except "in the sense of creating conditions that would make employment more attractive in regions where there are manpower shortages," see Manevich, 1978.

<sup>20</sup>Shabad, 1978, pp. 3-5.

<sup>21</sup>Khorev, 1973, p. 12; Chinn, 1977, p. 25; Sbytova, 1978, p. 37. One Uzbek newspaper notes:

To regulate the processes of migration on a scientific basis, it is necessary to determine the appropriate scale and direction of these processes and to take into consideration the national characteristics of the peoples and the structure of family life. As the research that we have conducted shows, since large-scale organizational-economic measures have not been put into practice to a sufficient degree, no significant change in the mobility of the Central Asian population, especially the rural population, can be expected in the near future.

Atamirzaev and Atagoziev, 1978.

<sup>22</sup>For example, see Perevedentsev, 1966; Zaionchkovskais, 1972a, pp. 240-241; Arutiunian, 1968, pp. 123-124. These planners can take little solace from recent figures on Central Asian vocational and technical training: At the beginning of the 1977 academic year, enrollment plans for the USSR as a whole stood at 92.7 percent, while in the Turkmen SSR enrollment stood at only 78.7 percent. Moreover, "in the Central Asian republics, a very small percentage of eighth-grade graduates of general-education schools enter vocational and technical schools (in 1976, the figure was 8.5 percent for the Tadzhik and Turkmen SSRs, 13 percent for the Uzbek SSR, and 14 percent for the Kirgiz SSR), and even lower percentages of these graduates enroll in secondary vocational and technical schools (5.5 percent in the Tadzhik SSR, 8 percent in the Uzbek and Kirgiz SSRs). By contrast, in the Latvian SSR, 27 percent of all eighth-grade general education graduates enter vocational and technical schools and 16 percent enter secondary vocational and technical schools." Bachurin, 1978, p. 7.

tural factors" constitute a major impediment to rural-urban migration, whether intra- or inter-republic. They define "cultural factors" more vaguely than the Western specialists noted above—although it is clear that by and large they agree with the overall thrust of the case against outmigration.<sup>23</sup> For the most part, Soviet demographers recognize—without being overly specific—that rural Central Asians, even young people of prime migratory age, find much that they like in the Central Asian countryside. As one Soviet demographer puts it: "While rural youth in Central Russia wish that in the countryside it would be 'as in the city', the townsfolk of Central Asia not infrequently want the city to be 'as in the native settlement'—type of living, social ties, developed auxiliary farming, situation of women in the family and production, etc."<sup>24</sup>

### AN ALTERNATIVE HYPOTHESIS

In analyzing the arguments by Western specialists for and against massive outmigration, we find the latter case to be intuitively acceptable, inasmuch as the cultural and other factors that oppose movement of this kind are observably strong ones. Moreover, outmigration on a large scale has not taken place, which supports this hypothesis. The hypothesis itself, however, requires further refinement. The debate in the West as to the likelihood of outmigration of Central Asians is too abstract and too narrow. In the first place, although the idea of "massive" outmigration is heuristically useful, it is difficult to quantify and therefore difficult to use in concrete policy analysis. In the second place, because the debate is structured to affirm or deny the concept of "massive," other significant but less than massive alternatives have gone unobserved and unanalyzed. That is, overconcentration on massive outmigration has resulted in a perceptual problem for the analyst in limiting the search for available alternatives to "all or none" scenarios.

The "massive" approach to the problem of outmigration leads to "worst case" analyses concerning how it might be brought about. A "worst case" would involve the use of coercive measures to force reluctant Central Asians to migrate. Coercion might include: (1) physically pushing rural settlers off the land using troops or the forcible deportation of entire ethnic groups, on the model of the mass deportations from the Caucasus to Central Asia during World War II;<sup>25</sup> (2) artificially lowering collective farm earnings, increasing the price or creating a shortage of food and basic necessities; (3) abolishing the right to "private plot" farming; (4) slowing down increases in the production of major Central Asian crops through a curtailment of investment in land reclamation. These methods might result in the migration of a large number of Central Asians from their national territories and perhaps even their more or less permanent resettlement in labor deficit areas. Such policies, however, might result in protest and rebellion, in terrorism, or in industrial or agricultural sabotage. These measures would be difficult to initiate and to enforce.<sup>26</sup> Moreover, it is reasonable to assume that Soviet leaders would be reluctant to destroy the credibility of the Soviet model for Third World development, an image-building process in which they have a substantial investment. This credibility certainly would be the first victim of coercion. From our perspective and, we would assume, from the perspective of a Soviet leader, this "worst case" is unacceptable for the costs it would engender.

Another selective approach would be to use various methods of administrative

<sup>23</sup>For example, see Saiakbaeva, 1978; *JPRS Translations on USSR Political and Sociological Affairs*, No. 923, 22 January 1979, pp. 29-36.

<sup>24</sup>Perevedentsev, 1978, p. 21.

<sup>25</sup>For a reasonably complete account of these deportations, see Nekrich, 1978.

<sup>26</sup>Azrael, 1977 pp. 12-14.

mobilization.<sup>27</sup> For example, graduates of Central Asian higher and specialized institutes could be required to serve for several years in areas of the regime's choosing as part of a more universal student obligation. Such a system now exists, but it is unclear if it is enforced evenly across national groups. Indeed, there is some indication that many non-Russians, like Russians, are exempt from or find ways to avoid this requirement.<sup>28</sup> More Central Asians could be drafted into the armed forces and detailed to construction battalions, which then could be employed more extensively in civilian projects.

A more long-range intervention process would be to create conditions allowing for a two or three stage migration, in which prospective migrants go first from their rural settlements to a small town, thence to a major city within the republic, and finally to urban areas in other republics.<sup>29</sup> According to Soviet demographers, in such a process the migrant becomes psychologically and professionally acculturated progressively to urban industrial life with each move.<sup>30</sup> This multistage intervention technique appears to have strong logic, which one-shot outmigration of Central Asians to the European USSR lacks. However, this surely would be an expensive proposition, as incentives will have to be offered at each stage. The Soviet leadership may be prepared to view this expense against a background of long-term political-economic needs and objectives, and accept the additional outlay.<sup>31</sup>

An intervention technique designed to encourage some Central Asians to migrate to labor deficit areas of the USSR would include creating more effective "pull" conditions in the reception areas as an enticement primarily to skilled and semi-skilled Central Asians.<sup>32</sup> Of course, less skilled workers also might be encouraged to migrate under these incentives, although more educated, better skilled workers are the most likely to be attracted. Moreover, some migration of unskilled labor is desirable to perform tasks skilled laborers will not do. The key incentive appears to be adequate housing, as both Russians and Central Asians have noted: If adequate or superior housing is held out as an incentive to migrate, the chances are greater that many Central Asians will move.<sup>33</sup> The lure of higher wages, specialized training, and other perquisites in addition to new housing may prove irresistible to some, perhaps many, but especially to educated, better trained workers. The regime clearly is aware of the opportunities of more selective migration planning. It is significant, we believe, that two recent authoritative statements on manpower balances, which pay particular attention to the Central Asian surpluses, called for "further development" of "organized recruitment, resettlement, public appeals, and job placement through local labor agencies," and for "a statewide job-placement system that will effectively decide questions of filling vacant jobs with a view to the interests of production and workers."<sup>34</sup>

The gradual intervention techniques noted above are the subject of a lively discussion in the popular, academic, and professional media, but no clear regime position has been established. Noticeably absent from this debate is any suggestion that "massive" outmigration of the kind talked about abstractly by Western specialists is possible. Soviet specialists have probably avoided speculation on this issue because they see it as lacking concrete policy applicability or because they can see first-hand the impediments to its realization. Instead, they have argued consistently for flexible and selective migration patterns, which hold out

<sup>27</sup>Ibid., p. 13.

<sup>28</sup>Personal communication by a non-Russian Soviet citizen to one of the authors.

<sup>29</sup>Peredontsov, 1972, p. 102; Chinn, 1977, pp. 28-30.

<sup>30</sup>Sbytova, 1978, p. 37.

<sup>31</sup>One recent report indicates that "the powerful economic levers at the disposal of the socialist state (planning the using of productive forces, instituting pay differentials, distributing public consumption funds, etc.) are not always used to full advantage to influence migration processes in the needed direction." Manevich, 1978, p. 39.

<sup>32</sup>Dadaashov, 1974, p. 122; Manevich, 1978, p. 39; Kasimovsky, 1973, pp. 33-45.

<sup>33</sup>Chinn, 1977, p. 33; Zaitonchkovskaya, 1972, pp. 144-149; Shabad, 1978, p. 11. "Bonuses Lure More Young Russians to Arctic," *Los Angeles Times*, 13 October 1978.

<sup>34</sup>Bachurin, 1978, p. 5-6; Maslova, 1978, p. 56.



the possibility of controlled migration of skilled and semi-skilled manpower into labor deficit areas of the western and northern USSR.

Even if gradual intervention techniques are adopted, their effects probably will be felt only after some years: First there will have to be a resolution of the policy debate and adoption of a policy, the administrative-organizational infrastructure for new programs must be created and the operational format tried and refined. In the interim, and perhaps for the longer term, more immediate measures for plugging particular labor gaps would be extremely beneficial. In fact, some stop-gap measures employing Central Asian skilled and semi-skilled manpower already have been undertaken. There is considerable evidence that the leadership already has initiated a "group approach" to outmigration in the form of organic economic units. It is possible to identify a number of Central Asian construction "trusts," which only recently have been used outside of their nominal ethnic territories.

The impetus for the creation of these trusts stems from a resolution of the Central Committee and the Council of Ministers of the USSR in April 1974 aimed at a total restructuring of the agricultural system of the Russian non-black-earth zone through massive land reclamation and the consolidation of old villages. Historically, the non-black-earth zone (*nechernozem*) of Russia consisted of the core of the Moscovite state, the region surrounding Moscow and Novgorod, plus the Murmansk region and some contiguous territories east of the Urals (see Fig. 3): This resolution was codified in 1976 by a directive of the Central Committee of the CPSU. In the latter action, the Central Committee acknowledged the role of Uzbek construction trusts and recommended their usefulness to republic central committees and lower party organs.<sup>35</sup> The Main Administration for Land Reclamation in the Non-Black-Earth Zone of the RSFSR (*Glavnechernozemuodstroï*) was created to oversee the planned reclamation, and it was subordinated simultaneously to the Ministry of Reclamation and Water Management of the USSR and to the Council of Ministers of the USSR.<sup>36</sup> Two Central Asian contractors were assigned the actual reclamation work. In Novgorod Oblast', the general contractor is the Ministry of Reclamation and Water Management of the Uzbek SSR. In Ivanovskaia Oblast', the contractor is the Main Administration of Central Asian Irrigation and State Farm Construction (*Glavnoe Sredneaziatskoe upravlenie po irrigatsii i stroitel'stvu sovkhovov*). These contractors established labor trusts for the actual reclamation work. In Novgorod, the trust is called Uznovgorodvodstroï; in Ivanovskaia, the trust is Ivanovoirsovkhozdstroï.<sup>37</sup>

Officially, Uzbekistan-based construction units have assumed the responsibility for irrigating 16,000 hectares, to drain 65,000 hectares, to improve 55,000 hectares, to build four state farms from scratch, to construct 180,000 square meters of housing, and to build production and service enterprises. During 1976-1980, construction costs are to reach 200 million rubles divided evenly between the two trusts.<sup>38</sup> One of the more important objectives of both trusts is to turn over—as gifts to their oblasts—two fully functioning state farms.

The current five-year plan for Uznovgorodvodstroï is to drain 42,000 hectares of land, irrigate 6,000 hectares, improve 25,000 hectares, and construct no less than 80,000 cubic meters of housing.<sup>39</sup> The trust had 2500 members in 1979.<sup>40</sup> This trust's two state farms, "Tashkent" (cost, 35 million rubles) and "Druzhba" (cost, 39 million rubles) are to be major

<sup>35</sup>"Ob obiazatel'stvakh kollektivov vodokhoziaistvennykh i stroitel'nykh organizatsii Uzbekskoi SSR po okazaniu pomoshchi Ivanovskoi i Novgorodskoi oblastiam v vypolnenii postanovleniia TsK KPSS i Soveta Ministrov SSSR po dal'neishemu razvitiu sel'skogo khoziaistva nechernozemnoi zony RSFSR," *Uzbekistan-Nechernozem'iu*, Moscow, 1979, pp. 3-4.

<sup>36</sup>*Prauda*, 3 April 1974; for updated information on the efforts to complete the reclamation of the non-black-earth zone, see Andreeva, 1978.

<sup>37</sup>Mamedov, 1974; Tursunov, 1974.

<sup>38</sup>Mamasulov, 1979, pp. 7-8.

<sup>39</sup>*Ibid.*, p. 31.

<sup>40</sup>N. A. Antonov, 1979, p. 57.

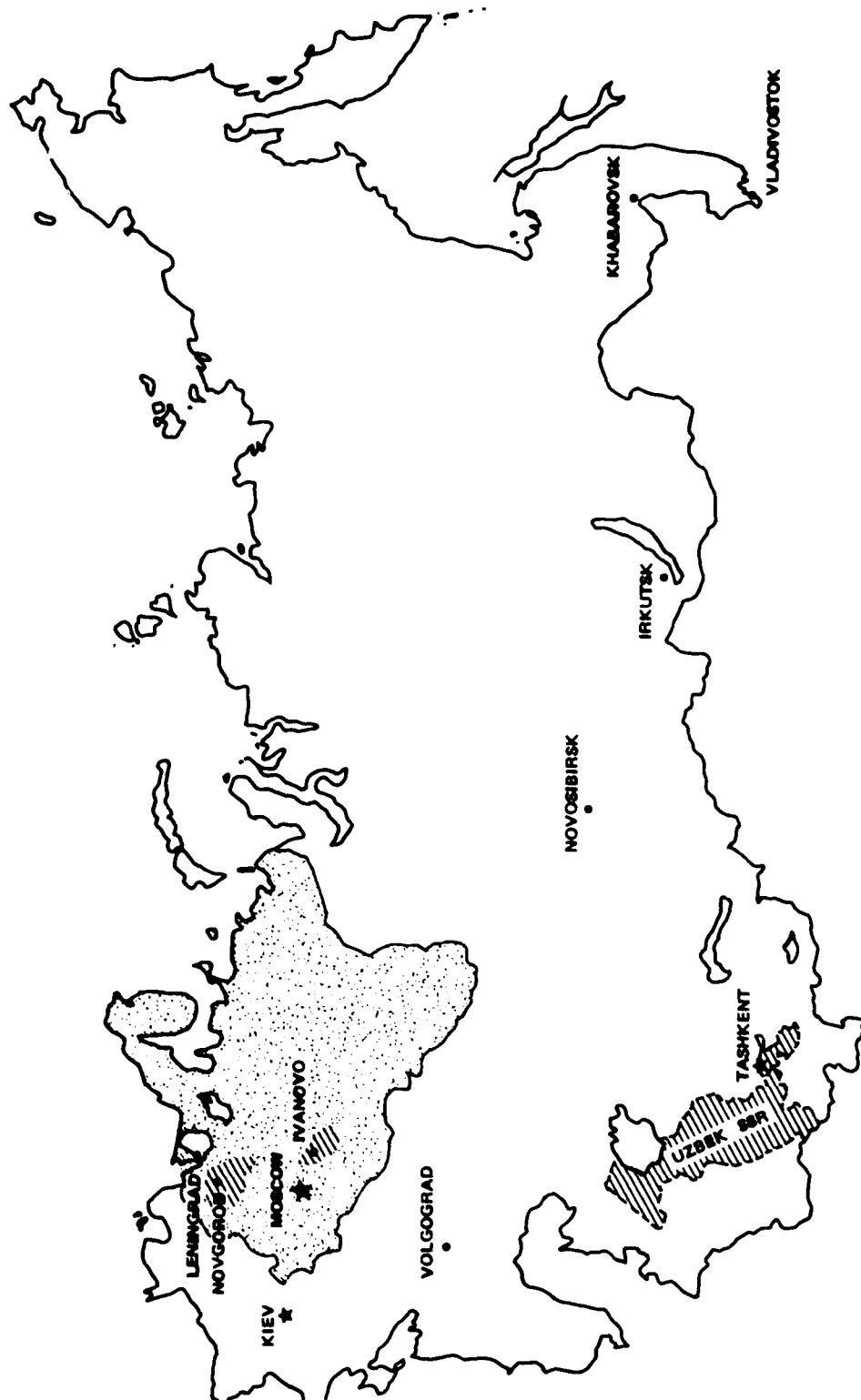


Fig. 3—Russian non-black-earth zone (Nechernozem)

vegetable, meat, and dairy producers in the region.<sup>41</sup> "Druzhba" is to be the largest animal husbandry complex in northwest Russia.<sup>42</sup> Ivanovoirsovkhozstroi in the Ivanovskaia Oblast' has similar goals. The state farm "Uzbekistan" is to be devoted primarily to dairy and vegetable raising; this farm alone was scheduled to produce 50 percent of the total vegetable output for the Ivanovskaia Oblast' in 1978.<sup>43</sup> Like its sister trust in Novgorod, it will establish its own plant for the production of construction materials and a facility to service its own machinery.<sup>44</sup>

The trusts are composed of functionally specific mobile mechanized columns (*peredvizhnaia mekhanizirovannaia kolonna*), or PMKs. Some PMKs are engaged in land reclamation, some in the creation of new state farms, and others are constructing the necessary technical bases and living accommodations for the trusts themselves.<sup>45</sup> We can identify six PMKs in the Novgorod trust and five in Ivanovskaia.<sup>46</sup> Both trusts are supposed to establish their own factories to produce some housing materials and both are to operate their own motorpools. Other materials are delivered from various republics and oblasts, but it is clear that planning, even to the work schedule level, is done by various organizations in Uzbekistan.<sup>47</sup> The trusts are apparently responsible for training some new workers from Uzbekistan and for upgrading the specialization level of others.<sup>48</sup>

The trusts are composed largely of ethnic Central Asians, and the regime has gone to great lengths to make the settlements in the non-black-earth zone and elsewhere as attractive as possible to them in terms of material and cultural incentives. For example, there has been a sizable investment in new housing, with more planned for the immediate future. (In Ivanovoirsovkhozstroi, 79 units of housing have been allocated, of which 68 were supposed to have been completed by January 1979.)<sup>49</sup> This would appear to be in keeping with Soviet demographers' belief that new housing in the host areas is an important incentive to migration. Other material incentives have been mentioned. For instance, a sports complex, an enclosed swimming pool, and a house of culture are planned for the Uznovgorodvodstroi state farm "Tashkent."<sup>50</sup>

These material incentives are part of a larger scheme to recreate the cultural ambiance of Central Asia. Characteristic of this policy is the building of teahouses on the state farms, which are important Central Asian social institutions.<sup>51</sup> Many sources speak of the difficult but steady adjustment of Central Asians to the northern climate, as well as to the different work regime required by the reclamation projects in the northern lands. Relocating organic units has blunted the obvious language problems, inasmuch as Central Asian languages, primarily Uzbek, appear to be in wide use in the trusts. In fact, the landscape of the new state farms and construction bases seems to have undergone considerable change with the arrival of the Central Asians: Uzbek dress is very much in evidence and mobilization slogans now are printed in Uzbek and Russian. However, many participants are apt to learn more Russian—a positive achievement from the regime's point of view. One Central Asian in Ivanovskaia, for example, now writes that he speaks Russian with the regional accent.<sup>52</sup> Furthermore, there is some evidence that relocation to the Russian north includes extended

<sup>41</sup> Mamarsulov, 1979, pp. 35, 36.

<sup>42</sup> Rakhim, 1978, p. 206.

<sup>43</sup> Rashidov, 1978, p. 8.

<sup>44</sup> Lopatin, Part I, 1978.

<sup>45</sup> Ibid.; Lopatin, Part II, 1978.

<sup>46</sup> Lopatin, 1978, Parts I and II; Mukhamadiev, 1979; Demidov, 1978.

<sup>47</sup> Ibid.

<sup>48</sup> Lopatin, 1978, Parts I and II.

<sup>49</sup> Lopatin, 1978, Part II.

<sup>50</sup> Mukhamadiev, 1978; Demidov, 1978.

<sup>51</sup> Lopatin, 1978, Part II; Mamarsulov, 1979, p. 26.

<sup>52</sup> Ibid.

families, although the restrictions or accommodations pertaining to this facet of the migration are unclear.<sup>53</sup>

It is uncertain at this stage if the regime is seeking to encourage permanent Central Asian migration to these regions. For various reasons, temporary migration is attractive to the Soviet leadership and to potential Central Asian migrants. In any event, the material incentives offered are apparently intended mainly to make the decision to migrate a less anxious one. The question of how long Central Asians are to remain in the host regions, either as permanent residents or temporarily as part of a regular labor rotation, is not discussed in the media.

Yet a third Central Asian trust, Nikolaevvolgovoedstroi, is composed largely of Uzbeks, who are assigned to the lower Volga regions of the Saratov and Volgograd Oblasts. This area is not part of the non-black-earth zone, but it requires extensive land reclamation and irrigation nevertheless. In fact, the Soviet leadership considers the Volga irrigation projects to be of the highest priority. The CPSU has decreed that the Volga Basin is to become an area of stable, guaranteed harvests—regardless of the weather—and a region of productive animal husbandry. The lack of water in this region is to be overcome by engaging the Volga and its reservoirs in extensive irrigation projects. The trust includes a number of experienced Uzbek irrigation specialists and construction units. Its 1978 goal was to complete 66 million rubles worth of construction work: drainage and irrigation systems, pumping stations, high tension lines, and its own production base and living settlement in the city of Nikolaevsk. Like the other trusts, the current primary task of Nikolaevvolgovoedstroi is to complete a large construction base, which is to be the foundation for its own construction efforts and then left intact to service the region. Its second major task is to construct some 2,250,000 rubles worth of housing at a Nikolaevsk state farm to house the builders and be left to the farmers who take over the state farm. This trust receives both workers and materials exclusively from Uzbekistan. Although this obviously is time-consuming and expensive, the trust already claims considerable success in extending the local irrigation system.<sup>54</sup>

Some Tadzhik labor units also are participating in programs of this kind as part of an all-Union Komsomol (Young Communists) assault construction effort. They are contributing to the construction of an experimental village in the Smolensk Oblast', a state farm in the Chuvash ASSR, the complex for the production of nuclear reactors in Volgogradsk, and general construction and support work for Baikal-Amur Railroad (BAM) and for the oil and gas complexes around Tyumen.<sup>55</sup> One report notes the participation of 102 "representatives of Tadzhikistan" in a larger 3000 member Komsomol shock detachment. The leaders of this sub-unit from Tadzhikistan, as might be predicted, are Central Asians.<sup>56</sup> Furthermore, it is clear that they were selected for particular skills. Yet other reports note the participation of Komsomol members from the Pamirs in this effort and some 3000 members from Uzbekistan who are engaged in "all-Union" construction efforts.<sup>57</sup> In 1979 alone, 4000 student workers were sent from Uzbekistan to the non-black-earth region; 2000 of them were sent explicitly to Ivanovskaia and Novgorod oblasti.<sup>58</sup>

Publicly these efforts are billed as brotherly cooperation between Soviet nationalities. On another level, the Central Asian press cites these efforts as repayment for earlier Russian assistance in reclaiming the arid lands of Central Asia. A historical connection has been devised to justify each particular effort. Nikolaevvolgovoedstroi is billed as a continuation of

<sup>53</sup>Ibid.

<sup>54</sup>Kovalev, 1978, p. 3.

<sup>55</sup>Zhbanov, 1979.

<sup>56</sup>Kommunist Tadzhikistana, 8 October 1978 and 28 October 1978.

<sup>57</sup>"Na glavnye stroiki," Kommunist Tadzhikistana, 27 October 1978, "Po novu seritsia," Kommunist Tadzhikistana, 21 November 1978, Mamarsulov, 1979, p. 40.

<sup>58</sup>Mamarsulov, 1979, p. 40.

the heroic defense of Stalingrad. The Novgorod effort is linked historically to the Central Asian contribution to the area's defense during World War II in which Rashidov, the First Secretary of Uzbekistan, was severely wounded. Work in Ivanovskaia is seen as strengthening the traditional ties between Uzbek cotton producers and Ivanovskaia textile manufacturers. In all cases, the "nativeness" of the reception area is stressed, and a common refrain is that one soon forgets the distances separating the trust participants from their native lands, inasmuch as native languages are spoken, streets are named as at home, even Uzbek national skull caps are worn. And as if to underscore that Central Asians are undertaking something akin to a "reverse virgin lands" movement, one descriptive article is entitled, "Don't Expect Us Back Soon, Mothers."<sup>59</sup>

Beyond the propaganda effort, more concrete reasons are given for the use of Central Asian trusts in northern land reclamation. In the first place, the areas being reclaimed need the kinds of specialists that are trained primarily in Central Asian institutes. Second, Central Asians already have land reclamation units, thus avoiding the long and expensive start-up times required if Russians were to undertake the task. Third, Central Asian reclamation trusts have equipment available for the job. And, finally, as Central Asians note with some pride, they have the requisite experience and skills to complete this difficult work without causing untoward side effects, such as flooding.<sup>60</sup>

The various trusts and shock detachments are attempts by the leadership to alleviate the deteriorating labor situation in the European USSR, particularly in the rural areas. The key concept appears to be the temporary assignment of skilled and semi-skilled Central Asian personnel to alleviate specific bottlenecks in the agricultural sector in keeping with stated regime goals. The first priority of Soviet agriculture, Secretary Brezhnev recently established, is the regeneration of the "age old Russian lands," a proclamation that has been followed and has been supported by a vocal propaganda campaign.<sup>61</sup> The importance of this project can be judged by its proposed results: Namely, by 1980 the non-black-earth zone is to produce one-sixth of the agricultural output of the entire USSR.<sup>62</sup> From all appearances, the Central Asian trusts and shock detachments have been employed successfully in this direction. In fact, at least one trust is to be doubled in size by 1979, and the plans of others are to be expanded.<sup>63</sup>

The trust scheme imaginatively addresses the problem of labor redistribution. In the first place, the chronic problem of trying to entice Central Asians to cities is bypassed in favor of temporary labor assignments to rural labor deficit areas. Second, moving an entire collective to an unknown environment—where the collective will be able to offer mutual support during the adjustment period—logically is easier than trying to get individuals to migrate. There has been at least one report, however, that the organization of labor and living conditions was inadequate, causing some Central Asians to leave.<sup>64</sup> Third, this "group approach" probably strengthens the possibilities for some kind of a fixed term of service, in which increasing numbers of Central Asians agree to work elsewhere in a group for a specified period of time and then return home; that is, they will serve as internal *gastarbeiter*. Early results—as they are reported in the Central Asian press—suggest that these conditions constitute a potent "pull" for many that may be sufficiently strong to offset the weak "push" factors operating in Central Asia.

<sup>59</sup> *Kommunist Tadzhikistana*, 28 October 1978.

<sup>60</sup> Rakhim, 1978; Lopatin, 1978, Parts I and II; Kovalev, 1978.

<sup>61</sup> Brezhnev, 1978a and b. For other recent discussions of this problem, see "Istoricheskoe znachenie nui'skogo (1978g) Plenuma TsK KPSS," Parts 1 and 2, *Voprosy istorii KPSS*, Nos. 10 and 11, 1978, pp. 67-82 and pp. 41-56, especially the remarks by V. P. Mozhin; *Sovetskaiia Rossiia*, 21 June 1978, p. 2; *Foreign Broadcast Information Service (FBIS)*, Soviet Union, Vol. 3, No. 15, p. T1; *FBIS*, Soviet Union, Vol. 3, No. 20, p. T1; Loshakov, 1978.

<sup>62</sup> Mukhamadiev, 1978.

<sup>63</sup> *Ibid.*

<sup>64</sup> *Komsomolets Uzbekistana*, 13 December 1978.

Unlike most migrations, where the economic burden falls most heavily on the migrant, the cost of the transfer of economic trusts from Central Asia to the non-black-earth zone and the lower Volga regions is borne by the regime. Given the scope of the agricultural problems facing these regions, it is probable that the regime has decided to accept these costs to obtain longer term gains, much as they have been willing to accept the high costs of developing Siberia. It is not self-evident, however, that using Central Asian expertise for this task is any more expensive than using local labor, even if the latter were as skilled and as abundant. It is appropriate to ask how far these reclamation efforts would have progressed without the assistance of several large Central Asian construction units of the type described. Moreover, the arrival of Central Asians to perform this land reclamation work probably released Russians for service elsewhere.

We believe we have identified specific intervention techniques for mobilizing Central Asian labor that have been overlooked in the debate concerning whether outmigration will or will not be "massive." Moreover, the regime clearly believes that such interventions have alleviated and to some extent will continue to alleviate labor deficits in the European USSR through the selective transfer of labor units from Central Asia to regions where their services are in short supply. Although the debate among demographers over the possibility of a more general Central Asian outmigration has not been resolved, the regime has demonstrated one possibility for relieving critical labor shortages in high priority projects. The trust idea may be expanded to embrace other kinds of agricultural and industrial enterprises. What we can identify at the present time probably is a pilot project to determine the feasibility of the trust idea (which also might explain the low visibility of trusts in the Soviet press until recently). The prominence recently afforded the trusts by Uzbek First Secretary Rashidov suggests that the pilot program is successful, that the trusts may be expanded, and that Moscow and the Central Asian leadership support the concept.<sup>65</sup> But this support is not without certain qualifications.

---

<sup>65</sup>Rashidov, 1978, p. 8.

### III. THE CASE FOR REGIONAL DEVELOPMENT AND ITS IMPLICATIONS

#### PROBLEMS OF UNEVEN REGIONAL DEVELOPMENT

The regional development of Soviet Central Asia always has represented a special problem to the Russian leadership. When the Bolsheviks under Lenin were consolidating their rule over Central Asia in the aftermath of the Revolution and the Civil War, they enunciated a double-edged commitment to these underdeveloped areas. On one hand, this commitment was ideological; raising the living standards of the less materially advanced peoples of the new federation to a level equal to that of the more advanced was one of Lenin's preconditions for achieving communism. This emphasis was codified at the Tenth and Twelfth Party Congresses in the early 1920s, which proclaimed the oft-ignored Leninist directive to locate new industry at the source of raw materials. On the other hand, this early commitment to Central Asia was openly pragmatic; it appealed to the highly motivated and imaginative Central Asian leaders, who, guided by visions of national self-determination, aimed to use Leninism to advance their own revolutionary model for socialist development—national communism.<sup>1</sup> It was only in the mid-1930s that Soviet power was sufficiently well ensconced in Central Asia to ignore the national communist challenge.

Neither good intentions nor political imperatives gave much of a boost to regional development in Central Asia, and what little did occur in the first quarter century of Soviet rule probably was hard to justify in view of pressing needs for investment elsewhere.<sup>2</sup> It was not until the massive relocation to Central Asia of important industrial enterprises from the western USSR during World War II that this region came to figure seriously in the Soviet industrial picture, but this auspicious beginning soon gave way to other postwar investment priorities aimed at rebuilding regions devastated by the war. Indeed, it was not until the end of the 1950s that Soviet officialdom again focused on Central Asia and its developmental problems. For the 1959-1965 and 1966-1970 economic plans, the Party set new industrial targets in the Central Asian republics; in some cases these were as high as targets for the republics of the European USSR.<sup>3</sup>

These latter plans notwithstanding, between 1959 and 1975 the republics of Central Asia had fallen well behind the average per capita national income, per capita industrial production, and percentage of new fixed investment.<sup>4</sup> As late as 1974, the gap between the European USSR and the Asian sectors in industrial capacity was enormous: 86 percent of this capacity was located in those European republics where the working age population is expected to show a marked decline, while in Central Asia industrial capacity totaled a mere 4 percent.<sup>5</sup>

These discrepancies have resulted in local demands for stepped-up development, which some Western observers see as thinly disguised nationalism.<sup>6</sup> Other pressures for intensified regional development result from the demographic trends outlined above and the regime's increased awareness of the potential social and economic consequences of these trends. Moreover, Central Asia's contribution to the Soviet economy has risen dramatically on the

<sup>1</sup>See Bennigsen and Wimbush, 1979.

<sup>2</sup>Sheehy, 1972, p. 556.

<sup>3</sup>United Nations Economic Commission for Europe, 1967; Goyette, 1974, Chs. VI and VII; Bernard, 1966, pp. 204-219; Sheehy, 1972, p. 556-557.

<sup>4</sup>See Table 3; Sheehy, 1972, pp. 557-558; Schroeder, 1974.

<sup>5</sup>McAuley and Helgeson, 1978, pp. 6-7.

<sup>6</sup>Conolly, 1967, p. 123; Hodnett, 1974, pp. 101-102.

fortunes of its primary product—cotton—of which Central Asia supplies nearly the entire Soviet crop. In 1976, cotton was the USSR's third most valuable export product, behind oil and gas. Cotton is the largest agricultural export, constituting half of all agricultural exports measured in dollars; and in 1976, more than 60 percent of Soviet cotton exports went to the developed West and Western Europe—that is, to hard currency customers.<sup>7</sup>

### THE IMPETUS FOR REGIONAL DEVELOPMENT

The impetus for regional development in Central Asia thus emanates mainly from native spokesmen who seek more development for their societies, specialists concerned about demographic and labor problems, and policymakers who seek to augment foreign currency earnings through increased cotton exports. In addition, there is a small but increasingly vocal group of central planners calling for the diversification of the Central Asian economies to provide products—mainly foodstuffs—to support the development of Siberia and the Far East.<sup>8</sup> In fact, this relationship recently has been viewed as part of a natural regional affiliation, with the development of Siberia figuring in the investment plans for Central Asia.<sup>9</sup>

These different approaches to the problem sometimes are complementary and, as we shall see, sometimes contradictory. Furthermore, proponents of more development are quick to use ideology in policy discussions: Lenin argued that regional development is valuable because it brings industry to the site of raw materials, and this, in turn, contributes "to a change in people's way of life and social-psychological outlook, their enlistment in the ranks of the working class, and improvement of the republic's social structure."<sup>10</sup> It is difficult to determine when ideology is the motivating force behind serious discussion on more substantive matters and when it is simply used in support of arguments that are unlikely to appeal to decisionmakers. In the debate over regional development in Central Asia, there is evidence of both.

The attractiveness of regional development to Soviet decisionmakers is the possibility that such development will solve some of the same problems that are considered solvable by outmigration. Establishing primarily light industry in this region could ease the labor shortages in the European USSR, assuming, of course, that mainly local labor was employed in the new industries; moreover, the redundant labor in Central Asia could be more productively employed. Regional development could help to narrow the earned per capita income gap between Asian and European regions of the USSR. Light industry could be developed at a lower social overhead cost in small towns than in large cities. Rapid urbanization, which would probably be a by-product of intensified industrialization, could raise the educational level of the natives, inculcating in them a greater technological awareness, spreading russification, and lowering the extraordinarily high birthrate. Finally, the psychological distance between the countryside and the city could be narrowed—a professed ideological tenet of Marxism-Leninism.

Concern for the best means of using the rapidly expanding Central Asian labor pool may prove to be critical in any decision regarding faster regional development. This is certainly the most frequently cited justification for such a policy in all-Union media and even more in Central Asian media.<sup>11</sup> Its importance was symbolized by the establishment by the State

<sup>7</sup>Central Intelligence Agency, 1978, pp. 11, 15.

<sup>8</sup>Shumanak, 1978, pp. 44-55, translated in *CISRP*, Vol. XXX, No. 38, pp. 9-10, *Kommunist Tadzhikistana*, 6 September 1978, p. 1, Dimov, Vostrikhov, and Ilarionov, 1974, in *CISRP*, Vol. XXVI, No. 20, pp. 11-12, 28, *Pravda vostoka*, 8 and 11 October 1978 and 1 November 1978.

<sup>9</sup>Bedrintsev, 1978, pp. 12-20.

<sup>10</sup>Shuster, 1977, p. 34, *Perevalentsev*, 1976.

<sup>11</sup>Bedrintsev, 1978, pp. 13-14.



Committee for Labor of the USSR Council of Ministers of an Uzbek branch of its Scientific Research Institute for Labor located in Tashkent.<sup>12</sup> Proponents emphasize that Central Asia must develop labor-intensive production sectors (extractive industries, agricultural processing, machine building, light industry, and metalwork);<sup>13</sup> construct large scale projects, such as new factories that can operate on resources found within the region and be located especially in nonindustrial parts of the Central Asian region;<sup>14</sup> develop new agricultural lands; and create new industrial settlements resembling "one-company towns," such as branches of larger urban enterprises or somewhat more dispersed "cottage industries".<sup>15</sup>

In a Soviet "best case" scenario, these different approaches to absorbing surplus labor would be complementary. Labor intensive industrial work would absorb surplus labor and condition it psychologically to the desired proletarian outlook. The construction of large enterprises would employ many Central Asian workers, and, if these new enterprises were to be located in suburban or even predominantly rural areas, management could avoid the problem of having to entice rural labor into distant cities. Furthermore, this would encourage the several-stage migration process—from rural areas to small towns, to larger cities, to other republics—whose advantages were noted earlier. Moreover, this movement would have the related consequence of releasing Russians and other European immigrants for service elsewhere in the USSR, perhaps in Siberia and the Far East.

Three related efforts would contribute to these general objectives. First, the further mechanization of agriculture, particularly cotton production, would release more rural labor to engage in nonagricultural pursuits; mechanization would raise the technological capabilities of Central Asians who operated machinery, theoretically making them more mobile because of their expanded technical education and enhanced industrial competitiveness.<sup>16</sup> Second, Soviet planners envisage the "reconstruction of the countryside," which is a program for consolidating dispersed hamlets on already cultivated land into larger settlements. This would eliminate many traditional villages and, in the opinion of Soviet planners, by implication reduce strong cultural impediments to migration.<sup>17</sup> Third, Central Asian women are being encouraged to join the industrial labor force. It is hoped that increased participation will slow the high Central Asian birthrate, for according to Soviet sociologists, these women have more children because they lack "socially useful labor."<sup>18</sup> Because cultivation of newly irrigated land is to be almost totally mechanized, new agricultural projects cannot be counted on to absorb growing labor surpluses. Therefore, reduction of the birthrate is a high priority.<sup>19</sup>

On paper, this would appear to be a comprehensive, although expensive, program for meeting Soviet regional development goals. In reality, it is beset with problems. We already have discussed the difficulties involved in persuading rural Central Asians to migrate to cities of any kind, whether within their own national republics or outside of them. Needless to say,

<sup>12</sup> *Pravda vostoka*, 24 May 1978; *Kommunist Tadzhikistana*, 26 November 1978, p. 3. In an important article, the late economic geographer A. A. Mints stressed that more and more frequently planners were coming to recognize "that the movement of people through space is far more complex and less controllable in every respect than the movement of things such as energy and materials." Mints, 1976, pp. 20-21.

<sup>13</sup> See, for example, "Ratsional'no ispol'zovat' trudovye resursy," *Kommunist Tadzhikistana*, 3 March 1978, Bachurin, 1978, p. 6; *Kommunist Tadzhikistana*, 30 November 1978; Shuruev, 1978, pp. 64-72.

<sup>14</sup> For example, *Turkmenakain ishra*, 17 March 1978; *Pravda*, 10 March 1978; *Kommunist Tadzhikistana*, 2 December 1978; Shister, 1977, p. 34.

<sup>15</sup> For example, Parfenov, 1977; Esian, 1978.

<sup>16</sup> A recent study of labor mobility in the Ukraine suggests just how great an incentive to migrate a technical vocation can be: "Farm machinery operators occupy first place among outmigrants from the countryside. . . Only 10 percent to 12 percent of those who are trained in these specialties [tractor or combine operator or truck driver] remain in the countryside to work." Yakuba, 1978, pp. 85-90; in *CDSP*, Vol. XXX, No. 44, pp. 13-14.

<sup>17</sup> *Pravda vostoka*, 24 May 1978, 4 August 1978, 19 September 1978, and 26 October 1978. Speech by Rashidov at the 10th Plenum of the Central Committee of the Communist Party of Uzbekistan, *Pravda vostoka*, 26 July 1978.

<sup>18</sup> See, for example, *Kommunist Tadzhikistana*, 3, 12, 16 September 1978, 4, 7, and 31 October 1978, and 2 November 1978 for articles exhorting young women to join the labor force; Galetakaia, 1978, pp. 149-152, in *CDSP*, XXVII, No. 45 (1975), pp. 15-16; "V Tsentral'nom Komitete Kompartii Uzbekistana," *Pravda vostoka*, 21 January 1979.

<sup>19</sup> For example, see Komar, 1979.

bringing industry geographically closer to labor does not solve the problem of low native participation in the industrial work force. People who for decades have shunned factory life for the more congenial environment of family and tribal-oriented collective farming supplemented by high yield private plot cultivation are unlikely to make this change without substantial inducements.<sup>20</sup>

## PROSPECTS FOR SMALL-TOWN DEVELOPMENT

Small town industrialization—meaning primarily the development of light industries—has been a stated national priority since the mid-1960s. Until recently, however, efforts have been directed mostly at the European USSR and at "support centers" created especially for new heavy industrial concentrations or resource extraction projects. However, development of small and medium-sized towns was given a substantial boost by the 25th Party Congress in 1976, which ordered stepped up examinations of potential small-town locations for adequate transportation links and for the availability of electric and water supplies. Placing new enterprises in regional centers is to be avoided. To ensure conformity with these general guidelines, the regional branches of the USSR Committee on Labor and Social Questions are to serve as watchdogs.<sup>21</sup>

But in Central Asia, small-town development has raised some special problems that suggest some limits to its influence in the region. A Western specialist has noted a typical situation surrounding the construction of an aluminum plant in the small Tadzhik rural town of Regar (now Tursunzade): "Although the site was chosen in part to provide employment in the area, the construction work force on the plant site, numbering 2,000 in 1975, included only 250 local residents. The influx of outside workers led to shortages in housing and services, dissatisfaction among newcomers with the living conditions, and a high rate of labor turnover, causing delays in construction. The aluminum plant finally started production in 1975, more than two years after the Nurek hydro station had begun generation of low-cost electric power earmarked especially for the plant." The influx of non-native labor and high labor turnover among native workers are recurrent themes in the Soviet press.<sup>22</sup>

Small-town industrialization requires considerable capital investment even though a significant increase in the native participation rate in the industrial labor force remains dubious. In addition, it has been suggested that the location of new industry in small towns is not cost effective because of the small scale of production.<sup>23</sup> Yet another objection is that funds are insufficient to provide even the basic amenities for the new towns; therefore, they will be unable to attract and hold workers.<sup>24</sup>

These objections notwithstanding, in the context of Central Asian labor surpluses, low cost of production and quickly recouping the investment are not necessarily the most important concerns. Rather, small-town development should aim first and foremost at absorbing surplus labor. To this end, one Central Asian planner, citing Kosygin as authority, has argued for the creation of labor-intensive industries such as machine building (especially electrical, radio-

<sup>20</sup>Latifi, 1975. The reporter concludes that many Tadzhiks prefer the ambience of rural life "for reasons of economic advantage and social psychology."

<sup>21</sup>Parfenov, 1977, *Shahad*, 1978, p. 14. Despite these policies, the concept of small-town development has come under attack by those who believe too many settlements of this size are being started at the expense of large urban areas with no hope of obtaining workers. The general findings of this report apply primarily to areas other than Central Asia, and small town industrialization will probably continue to receive attention from Soviet planners, particularly as it pertains to Central Asia. See Kurkchi and Mamaladze, 1978, pp. 31-36, in *IXSP*, Vol. XXX, No. 44, p. 13.

<sup>22</sup>*Shahad*, 1978, pp. 2-3; Parfenov, 1977, *Pravda vushka*, 25 November 1978. The latter source calls for improving working conditions and for using older workers as tutors.

<sup>23</sup>*Shahad*, 1978, pp. 14-15; Perevedentsev, 1968, translated in *IXSP*, Vol. XX (1968), No. 3, p. 12.

<sup>24</sup>Kurkchi and Mamaladze, 1978, p. 13.

electronics, and instrument building), metalworking, as well as light and food processing industries. These industries by their very nature can be decentralized to other small towns, regional centers, and even villages.<sup>26</sup> In addition, Soviet planners are apparently inclined toward assuming the additional investment burden for small-town development. One clear incentive in this direction is the possibility of a reverse migration of Russians and other Slavs from large Central Asian cities, where they are heavily overrepresented in the industrial work force.<sup>27</sup> For the most part, Soviet demographers seem to accept as given that as skilled and semi-skilled positions are relocated with light industry to Central Asian small and medium-sized towns, European Soviet workers will be more inclined to migrate out of Central Asia— it is hoped to Siberia and the Far East, where their skills are sorely needed—rather than to follow these industries to what is for them a much less congenial cultural environment. At the very least, it is hoped that small and medium-sized town industrial development will stem the flow of Europeans into Central Asia. These same demographers neglect to discuss a probable flaw in this reasoning, however: If Russians choose not to leave large Central Asian cities to chase job prospects elsewhere, they are unlikely to be fired from their present positions, even if they are redundant.

### THE PARADOX OF AGRICULTURAL MECHANIZATION

In theory, Central Asian rural labor could become available for industrial development as a result of another ambitious effort: the mechanization of cotton production. Mechanization is seen as a means of reducing the rural labor surplus by forcing redundant workers off the land while lowering the cost of cotton production, bringing social change to the Central Asian countryside (especially to the role of women), and upgrading the level of educational and technical skills of the rural inhabitants.<sup>27</sup>

Mechanization has been a high priority for Central Asian cotton growing since the mid-1950s. It should not be forgotten, however, that this commitment to mechanization was made when rural overpopulation was projected to be far less severe than it has become. At that time, mechanization offered an opportunity to lower the cost of cotton production, because capital was undervalued and because it was consonant with the overall emphasis of Soviet modernization. Original policy was based on a weak economic rationale, but the regime has pursued it persistently. Indeed, one might argue that the idea of mechanizing cotton production in Central Asia assumed a life of its own. The current regime uncritically supports further mechanization. Its current champion is Brezhnev himself, who has extolled the importance of mechanized "agro-industrial complexes" as a solution to perennial Soviet agricultural problems.

In light of the problems Soviet planners have encountered trying to make Central Asian rural-urban migration a reality, it is difficult not to conclude that the campaign for total mechanization is justified only in the abstract. Mechanization is paradoxical: Hand labor displaced by machines simply contributes to the existing rural labor pool. In the absence of rurally located industries, and where this labor is only marginally mobile, this surplus labor force can only increase.

To heighten this paradox, Central Asian planners have repeatedly stressed the desirability of rapid mechanization almost as if there were no surplus labor problem. Uzbek leaders, for example, called for 85-90 percent of the cotton harvest to be machine-picked by 1980.<sup>28</sup>

<sup>26</sup>Bedrintsev, 1978, p. 14

<sup>27</sup>For a discussion of reemigration possibilities, see Ryshin, 1979, pp. 10-12

<sup>28</sup>Hodnett, p. 78, provides an excellent analysis of the policies, attitudes, successes and failures of Central Asian cotton growing under Soviet rule

<sup>29</sup>Rashidov, 1978. Tadzhik leaders are less optimistic and perhaps a bit more realistic, calling for a 60 percent machine harvest rate in 1978-79. See Rasukov, 1978, p. 7

Hand picking is to be eliminated entirely, with the possible exception of the harvesting of fine staple cotton, which the combines damage.<sup>29</sup> What makes this effort even more interesting is that it is propagandized simultaneously with efforts to start or relocate labor-intensive small industries in rural areas with large concentrations of surplus labor, although Central Asian specialists must surely realize how long it would take relocated or new industry to absorb the rural labor displaced by mechanization.<sup>30</sup>

To buttress arguments concerning the efficiency of mechanized cotton harvesting, Central Asian media cite and applaud high levels of mechanized cotton harvesting in selected districts.<sup>31</sup> However, these would appear to be isolated successes. The great majority of reports indicate a high breakdown rate and poor maintenance of cotton harvesting machinery; only a small fraction of available machines operate in most areas because of a shortage of operators; unskilled combine operators knock down too much cotton before it can be picked; machinery is not provided where and when it is needed; and rural laborers are very reluctant to abandon hand picking.<sup>32</sup> The result is that Central Asian cotton harvesting remains very labor-intensive.

Russian planners in Moscow and Central Asian planners in the borderlands push mechanization for different reasons. For those in Moscow, the mechanization of Central Asian agriculture is one of the continuous policies spanning the Khrushchev and Brezhnev eras. It is supported by doctrine and by the existence of such enterprises as harvest-machine building plants.

For Central Asian planners, rapid mechanization—regardless of how it affects the labor force—is a lever in the larger political struggle. These planners are committed to further expansion of Central Asian agriculture, which will entail massive investment in irrigation. Their support for more mechanization is not directly linked to the problem of rural overpopulation. Rather, it is seen as a means of increasing agricultural production, thereby strengthening Central Asia's economic and political claims relative to other areas of the country.<sup>33</sup> Given Moscow's commitment to mechanization, significant investment for reclamation of additional lands would probably not be forthcoming unless there is a simultaneous and clear commitment to bring this land under cultivation in a modern, mechanized fashion. The Central Asian leadership apparently has accepted this condition as the *sine qua non* of further agricultural development.<sup>34</sup> This could explain why they are so openly committed to the mechanization of cotton plantations, despite the effect on rural overpopulation.

## THE POLITICS OF WATER

The importance of irrigation to Central Asian agriculture cannot be exaggerated. Rainfall is insufficient; without irrigation, there can be no cultivation of significance.<sup>35</sup> To date, Soviet

<sup>29</sup>For example, see *Pravda vostoka*, 30 September 1978 and 18 October 1978.

<sup>30</sup>For example, see Rasulov, 1978, p. 9.

<sup>31</sup>For example, *Pravda vostoka*, 31 August 1978, 17 September 1978, and 19 October 1978 for articles on districts that realized particularly high mechanized harvests.

<sup>32</sup>A sample reading of six month's worth of almost any Central Asian newspaper will offer this spectrum of problems besetting mechanization in graphic detail. Of course, these problems are not peculiar to Central Asia but afflict most of Soviet agriculture.

<sup>33</sup>References have been made to the Central Asian republics constituting "an economic system of the eastern regions" (which include Siberia and Kazakhstan) Bedrintsev, 1978, p. 12.

<sup>34</sup>Komar', 1979.

<sup>35</sup>Mamedov, 1969, p. 7.

efforts to irrigate Central Asia have been impressive. Centuries-old irrigation networks have been replaced by massive engineering projects such as the Karakum Canal. By 1976, 7.2 million hectares had been irrigated in Central Asia and Kazakhstan, and the optimistic projection for the 10th Five-Year-Plan calls for an additional 1.1 million hectares.<sup>36</sup> Lewis projects that 20 million hectares is all the Soviets can hope to irrigate given existing water availability and then only if they significantly upgrade their techniques. In his estimation, a more realistic goal is 8.8 million hectares, which is close to the 8.3 million the Soviets themselves envision by the end of the current Five-Year-Plan. He concludes that actual and planned irrigation projects are unlikely to bring enough land under cultivation to absorb the rapidly increasing Central Asian population.<sup>37</sup>

Although there have been some minor variations in detail, the scheme to reroute Siberian rivers would be essentially as follows. Part of the flow of the Irtysh, Ob, and Tobol Rivers would be diverted through damming and put through a series of canals that would serve a network of waterways feeding the Amu Daria and Syr Daria Rivers, thence to the Aral and Caspian Seas.<sup>38</sup> A related effort envisions the diversion of the Pechora River—through the Kama River—to the Volga. The latter project is intended to provide irrigation largely to European regions of the USSR. The cost for these projects will be staggering. G. V. Voropaev, Director of the Institute of Water Problems of the USSR Academy of Sciences, estimates that the European part of the river diversion scheme will cost about 2.5 billion rubles and the Asian part about 14 billion rubles. Following the actual rerouting, bringing the newly irrigated Central Asian lands into production would cost yet another 17 billion rubles over an unspecified period of time.<sup>39</sup> Voropaev's estimate is optimistic; others have placed the cost of irrigation and bringing the land into production as high as 100 billion rubles.<sup>40</sup>

The idea of diverting Siberian rivers to serve southern areas is an old one, but it has acquired a new urgency by the rapid depletion of Central Asian water resources in the 1970s.<sup>41</sup> An already critical water shortage not only threatens ambitious plans to bring extensive tracts of arid land under cultivation but also imperils further industrial development. Water shortages currently are being reported in Tashkent, Samarkand, Bukhara, Termez, and other industrial centers.<sup>42</sup> In part, these shortages are the result of mismanagement and waste; but clearly the main concern lies in an inability to satisfy heavier water demands from new enterprises and associated workers' settlements.<sup>43</sup> Increases in the amount of irrigated land and further industrial development can only exacerbate this situation.

Support for the diversion scheme from Central Asian leaders appears to be universal. Leading figures—including the First Secretaries of the Uzbek, Kazakh, and Turkmen republics—have been outspoken in their support.<sup>44</sup> Sharaf Rashidov, First Secretary of the Uzbek Communist Party and a member of the ruling Politburo, has been particularly vocal. This lobbying effort is a mixture of warnings and promises. In a recent speech Rashidov cautioned, "For all intents and purposes, by 1985 existing water resources for the reclamation of new lands will be exhausted. This means that the economic development of the republic, first of all its agricultural production, depends to a large extent on the acceleration of organizational work on the diversion of a part of the Siberian rivers to Central Asia."<sup>45</sup> Obviously Rashidov is playing his "cotton card" in statements like this, and this gambit is supported at many lower

<sup>36</sup> *Narodnoe khoziaistvo SSSR*, 1977, p. 328; *Pravda*, 26 May 1976.

<sup>37</sup> Lewis, 1982; also, Lewis, Rowland, and Clem, 1976, pp. 356-357.

<sup>38</sup> Krush, 1976, p. 2.

<sup>39</sup> *Pravda iroshka*, 30 August 1978.

<sup>40</sup> Krush, 1976, p. 5.

<sup>41</sup> *Ibid.*, p. 2.

<sup>42</sup> For example, see *Pravda iroshka*, 3 August 1978.

<sup>43</sup> Nekrasov and Razin, 1978.

<sup>44</sup> *Pravda*, 26, 27, and 28 February 1976.

<sup>45</sup> *Pravda iroshka*, 26 July 1978.

levels.<sup>46</sup> However, expanded irrigation is required to increase meat, dairy, fruit, rice, and vegetable production in Central Asia, a course that Brezhnev and others have stressed repeatedly as a means of easing the food crunch not only in Moscow and Leningrad, but particularly in the developing areas of Siberia.<sup>47</sup> A number of Central Asian specialists have emphasized these important economic connections between Central Asia and the rest of the USSR, and one recently coined what probably will become an increasingly apt metaphor:

The timely redistribution of water with the aim of guaranteeing the supply to Central Asia will permit the resolution of a number of important national economic problems. . . . First, with the growth of available land resources, the possibility will appear to expand the amount of land under cultivation for cotton and other agricultural products, to improve the mix of products, which, in the final analysis, will result in increasing the production—in addition to cotton—of vegetables, fruits, grapes, and dairy and meat products. This will create favorable conditions for the organization of a "green bridge" from Central Asia to Siberia, as a result of which Central Asian republics will be able to increase their contribution to the solution of problems of state-wide importance: to improve the supply of produce for the population of Siberia.<sup>48</sup>

One of the more popular arguments in favor of the diversion project is that expanded irrigation will recoup investment quickly, and proponents cite the example of the Karakum Canal, which not only has paid for itself but also made a profit, according to Soviet sources.<sup>49</sup> As we shall see, some people are prepared to dispute this contention.

Proponents of the diversion project have shown themselves to be adept at turning pronouncements of the Russian leadership to their advantage, even supporting (and perhaps distorting) the emphasis of these pronouncements with reference to Lenin's prediction "that irrigation will recreate—give birth to—the region, bury its past, and reinforce its passage into socialism."<sup>50</sup> The treatment of Brezhnev's recent book *Tselina (Virgin Lands)* in the Central Asian press is a good example. It is stressed that the reclamation of arid land in Uzbekistan is the continuation of work begun by the General Secretary when he was breaking new agricultural frontiers in Kazakhstan; that the continuing conquest of Uzbekistan's virgin lands through land reclamation is an act of heroism equivalent to the best traditions of the "virgin landers" and a testing ground for "new Soviet men." For the most part, the advantages that might be derived locally (more employment, more investment, greater political power) have been played down in favor of more universal appeals, such as Brezhnev's proclamation that "the reclamation effort has achieved a scope previously unknown to the entire world . . . [it] has become a concern of the nation as a whole."<sup>51</sup> The Tadzhik press has mounted a similar campaign.<sup>52</sup>

Gustafson has noted that various interested scientific institutions throughout the USSR have expressed support for the proposal to divert the Siberian rivers southward. In his opinion, the positions of these institutions reflect their own bureaucratic interests and professional biases. For example, *Soiuzvodproekt* (the principal long-term planning arm of the Ministry of Reclamation) and *Gidroproekt* (the hydropower engineering agency) support the

<sup>46</sup>For example, Musakhanov, 1978.

<sup>47</sup>Ibid., also *Pravda isvoboda*, 12 November 1978, 14 November 1978, and 26 November 1978.

<sup>48</sup>Ziadaullayev, 1979, p. 18.

<sup>49</sup>FRIS Soviet Union, 29 November 1978, p. T1, *Pravda isvoboda*, 24 November 1978; speech by Kunayev, *Pravda*, 26 February 1978; speech by D. R. Rasulov, *Kommunist Tadzhikistana*, 23 December 1978.

<sup>50</sup>Belavskii, 1978.

<sup>51</sup>*Pravda isvoboda*, 18 August 1978, also, 23 November 1978 and 3 December 1978. Notes Uzbek First Secretary Rashidov: "The piercing words of Leonid Il'ich Brezhnev are especially close to the hearts of all residents of our sunny region because Uzbekistan is one of the most 'virgin lands' oriented of the republics and the capacious word *tselinsk* has become native to the language of our work-loving people." *Pravda isvoboda*, 24 November 1978.

<sup>52</sup>For example, *Kommunist Tadzhikistana*, 14 November 1978, 15 November 1978, 19 November 1978, and 28 November 1978.

concept of major irrigation projects. The positions of various regional institutions of the Academy of Sciences tend to be determined by regional conditions, and those of the different branches of the Academy itself reflect a functional or professional bias.<sup>53</sup> Kriach notes the support of research establishments and the Soviet nuclear power lobby (the excavation could be done using nuclear explosions), as well as of Obkom and Raikom Party secretaries whose territories bound the prospective canals. By their reckoning, development will "follow the canals," thereby favoring their districts for future investment funds and raising their own political stock in the Soviet scheme of things.<sup>54</sup> Undoubtedly support for the diversion project at present comes from various quarters, including some of Moscow's trusted Russian emissaries to the borderlands, who often become advocates for Central Asian development but never for Central Asian nationalism.<sup>55</sup> There can be little question that this diversity of support results from the unconstrained nature of the discussion so far. When a decision at last is made by the central leadership, the public spectrum of opinion may narrow.

The strength of the opposition to river diversion can be gauged from the following: Despite annual proclamations announcing the start of the project dating back to 1971, the scheme remains largely conceptual and experimental.<sup>56</sup> Opponents emphasize such objective factors as ecological consequences and cost. Soviet ecologists, whose influence weighs more heavily in Soviet policy debates of all kinds than formerly was the case, have raised the following general points: that past attention to technology issues often has been at the expense of the environment; that ecologically uninformed development strategies will continue to result in environmental catastrophes and low economic returns; and that the Siberian diversion scheme, therefore, must be investigated thoroughly and designed in such a way as to minimize ecological damage while maximizing economic returns.<sup>57</sup>

More specifically, opponents argue that diverting water from Siberian rivers will upset the thermal balance of the Arctic Ocean, thereby affecting the climate of the northern hemisphere.<sup>58</sup> To consider these problems, no fewer than 140 different organizations have been commissioned to do feasibility studies in the new Five-Year-Plan, an example of bureaucratic overkill that has led at least one observer to suggest that opponents in the leadership may be trying to kill the project for failure to reconcile mountains of conflicting data.<sup>59</sup> Although the studies of the Asian and European variants of the diversion plan were given official first-stage completion dates of 1980 and 1979, respectively, G. V. Voropaev, Director of the Institute of Water Problems of the USSR Academy of Sciences, already has discounted ecological issues while noting that water consumption in Central Asia will double by the end of the century.<sup>60</sup> Because not even the preliminary studies have been completed, one can deduce that Voropaev's certainty is motivated by other than scientific proof.

Although ecological objections to the proposed diversion scheme appear to raise serious issues, the principal stumbling blocks clearly concern utility and cost. In the first place, it has been argued that it might be less costly to rely more on synthetic fibers rather than to expand cotton production. This would require less irrigation or, at the very least, push the decision to undertake expensive diversion schemes into the next century.<sup>61</sup> Second, it has been noted that massive infusions of water will not necessarily end the Central Asian water problem, as the existing irrigation support systems—canals, spraying technology, reservoirs, salination

<sup>53</sup> Gustafson, 1977, pp. 26-33.

<sup>54</sup> Kriach, 1976, pp. 3-4.

<sup>55</sup> For example, see the remarks by Critchlow, 1977, p. 20.

<sup>56</sup> Kriach, 1976, p. 1, fn. 4; Proda, 7 April 1978.

<sup>57</sup> Conolly, 1978; Voronitaya, 1978.

<sup>58</sup> V. S. Antonov, 1963, pp. 25-26.

<sup>59</sup> Proda, 14 December 1977; Kriach, 1976, pp. 4-5.

<sup>60</sup> Voropaev, 1978.

<sup>61</sup> Ukrainshii, 1972, p. 70. But cf. Parnov, 1978, p. 68, for a contrary view.

control, and the coordination of water management and conservation—all require substantial attention, time, and investment before new water resources can be used efficiently. In fact, Moscow has demanded more efficient water management in Central Asia generally, and the eventual diversion of Siberian rivers may be tied to a successful conservation plan.<sup>62</sup> However, improvements to the existing irrigation system in Uzbekistan alone, according to one expert, will cost 7 billion rubles, require 20 to 30 years to complete, and be accompanied by systematic removal of land from cultivation.<sup>63</sup>

But the key issue is that of investment priorities. The marked slowdown in the Soviet economy has heightened the competition for the nondefense ruble among advocates of different developmental strategies. Simply, if the projected billions of rubles were spent for river diversion into Central Asia, they would be unavailable for investment in other crucial regions of the USSR: Siberian development, particularly energy sources, is a high priority; the Baikal-Amur Railroad must be completed; the regeneration of the non-black-earth region will require large capital outlays; and the development of the Volga Basin, entailing water diversion, is an important goal. Clearly, differences of opinion can occur among decisionmakers with different ideas about the scope, pace, and cost of further Soviet development; and one should be cautious about imputing particular motives to individuals without substantial evidence. Various sources, including emigrés who are familiar with the political environment and even leading personalities, argue that several important Soviet Russian leaders and many lesser bureaucratic actors prefer the development of projects that benefit Russia and Russians, often at the expense of non-Russian regions and populations.<sup>64</sup>

<sup>62</sup> *Pravda*, 27 November 1978; reprinted in *Kommunist Tadzhikistana*, 29 November 1978.

<sup>63</sup> Ziadullaev, 1979, p. 16. For recent statements on better water management see *Pravda vostoka*, 26 July 1978 and 30 August 1978, on combating salination, *Pravda vostoka*, 5 October 1978; on reducing seepage from irrigation canals by lining them with concrete and planting trees, *Pravda vostoka*, 1 September 1978 and 11 August 1978; on reservoir management, *Pravda vostoka*, 31 August 1978. Despite the attention now being given to it, the campaign to improve the use of available water resources is facing serious difficulties. There are numerous complaints in the local media of a lack of appropriate technology to reconstruct existing irrigation systems and that well-known Soviet organizational impediments are slowing construction of new reservoirs. *Pravda vostoka*, 29 October 1978 and *Kommunist Tadzhikistana*, 26 November 1978. Moreover, ecological objections about the unchecked exploitation of Central Asian rivers have been raised locally. *Pravda vostoka*, 3 November 1978; and problems of industrial pollution, which diminish usable water supplies, remain unresolved. *Pravda vostoka*, 20 October 1978.

<sup>64</sup> "Russia-first" policies, according to a number of recent emigrés who have been interviewed on this point, are associated with former Minister of Agriculture (now Ambassador to Japan) Dmitrii Polyanskii and with former Politburo member Aleksandr Shelepin, among others. Polyanskii and Shelepin were demoted, probably in part because they spoke out on the subject of Russian prerogatives in the Soviet multinational state and because they worked to mobilize constituencies in support of their programs. Their demotions, emigrés report, in no sense diminished support for their ideas, perhaps the contrary. Russian nationalist sentiments remain strong at many levels of the Party and the government bureaucracies and have found more frequent expression in underground literature. Calls for a more militant nationalist Russia with regard to the Soviet non-Russian minorities and a curtailment of investment of Russian resources in their development have a strong resonance in the Russian masses as well. Perhaps the most impassioned appeal of this kind is Solzhenitsyn, 1974, pp. 26-32, in which he advocates the development of the Russian Northeast and the Siberian massif as the last and natural refuge of the Russian people. For a discussion of this Russian nationalist reaction, see Wimbush, 1978, pp. 349-360; Wimbush, 1979; Yanov, 1978.



## IV. CONCLUSIONS

The Soviet leadership is faced with a serious manpower problem for at least the next two decades. This problem is not one of quantity as much as it is one of labor resource distribution: Although the European regions of the USSR for the most part are experiencing increasingly severe labor shortages, the Central Asian republics have substantial labor surpluses. In theory at least, these surpluses in the eastern regions of the USSR could improve the overall manpower picture in both the short run (because of significant existing surpluses) and the long run (because the age structure of the Central Asian regions ensures a growing working age cohort for the foreseeable future). To harness these existing and potential labor surpluses efficiently, the Soviet leadership must devise effective demographic policies to deal with the manpower distribution issue.

At the present time, the regime appears to be flirting with the two general demographic policy options outlined in the body of this report: the redistribution of labor resources through various types of Central Asian outmigration to the RSFSR and regional development in Central Asia itself to take advantage of surplus manpower at its source. We have found no evidence to suggest that the regime prefers one option over the other; rather, it seems to be playing both cards at once. This might be explained by indecision in the leadership concerning the most effective method for mobilizing Central Asian labor. However, this dualistic approach might suggest that the Soviet leadership recognizes some of the inherent limitations in outmigration and in regional development, and, therefore, is opting for a combination of remedies to offset specific limitations in each approach. Of course, nothing dictates that one or the other option must be adopted in toto; outmigration and regional development are not mutually exclusive. The preference of the Brezhnev leadership for middle courses in domestic affairs suggests that this combination approach is in keeping with his personal style.

In fact, the middle of the road offers a number of advantages. In terms of outmigration, the selective intervention techniques outlined above, particularly the program of Central Asian trusts, avoid many of the complex problems that a more full-blown outmigration policy would create. The trust concept appears to provide a means of inducing some Central Asians with marketable skills to migrate out of their native region, despite strong social and cultural incentives to remain. This movement is from one rural area to another; the program implies a fixed term of service in the host areas; and, one might argue, this kind of migration is true to the Central Asian concept of the movement of the *ulus*,—that is, of an entire Muslim-Turkic community. Further, selective outmigration provides a justification for the relocation of Central Asians to skeptical Europeans who might be inclined to resist the resettlement of Central Asians on European territory, inasmuch as the incoming Central Asians bring with them vital skills that the host areas sorely need. Moreover, trusts offer the opportunity to relocate skilled laborers rather than those of an undifferentiated quality into labor short areas. Such a process of "plugging the gaps" in a deteriorating labor picture may prove to be more efficient in the short term (and possibly in the long term) than the indiscriminate transfer of a greater number of workers of questionable skills. Finally, the trust scheme, if successful, might be extended to other labor short areas of the USSR that require transfusions of specified expertise.

A middle of the road strategy for the regional development of Central Asia appears to be the regime's preferred position at the present time. A total commitment to develop this region probably would entail the diversion of Siberian rivers to the south, the maximum extension of Central Asian irrigated agriculture, and a far-ranging commitment to labor-intensive industries that can be located outside of major urban areas. Obviously, such a policy would require

massive investments; and it is reasonably clear at this juncture that the Soviet leadership, for a variety of reasons, is unwilling to make an economic commitment of this magnitude. In view of other military and nonmilitary claims on resources in a slowing economy, the development of Central Asia at this stage would require an unpalatable and perhaps economically unsound reorientation of investment priorities. Furthermore, it is not difficult to imagine the reluctance of many Russian planners to develop the Central Asian periphery rather than Siberia or other major Russian projects. Undoubtedly, these perceptions are heightened by the intensification of Central Asian demands for more investment and economic autonomy, by unrest among the Central Asian masses, and by the recent upheavals among the Muslim populations in states bordering Central Asia.

The Brezhnev regime has worked to balance these competing claims. It has provided continued development for Central Asia without making commitments of the size required for rapid regional development. At the same time, it has funneled some of this investment back to Russia proper, in the form of Central Asian trusts, to revitalize distinctly Russian resources. A decision on rerouting Siberian rivers has been delayed; meanwhile Central Asians have been encouraged to use their available water resources to better advantage. The regime has responded hesitantly to the pleas of Central Asians for more rapid development of labor intensive industry; at the same time Moscow has tentatively experimented with locating new enterprises in small towns and regional centers.

It is unlikely that outmigration as it is currently structured or regional development under the half measures noted above will be able to absorb the growing Central Asian labor surplus, although these measures almost certainly will have some positive effect in the short term. Ultimately, however, the regime will be forced to make more far-reaching decisions concerning Central Asian development. At the center of such a reevaluation will be the question of rerouting the Siberian rivers, for without additional water, there are soon to be realized limits to agricultural and industrial growth in the region. Approval of the diversion scheme would signal the regime's commitment to full-scale Central Asian regional development. On the basis of the available evidence, the Brezhnev regime is unwilling to make this decision and instead will bequeath the whole thorny issue to the next generation of Soviet leaders.

It is possible that outmigration and regional development are more closely linked than meets the eye. For example, one can envision a scenario in which the effectiveness of sending Central Asian trusts to the Russian non black earth zone as well as the ability and willingness of Central Asian leaders to participate enthusiastically in this mobilization are being tested over an initial period of several years. The Central Asian quid pro quo for these services is certain to be more water. In any event, the successful use of Central Asian labor in the RSFSR will give Central Asian leaders a lever for exacting more investment concessions from Moscow. A tradeoff of labor for water is a logical starting point for these negotiations.

Selective outmigration and Central Asian regional development offer some encouraging opportunities to the Soviet leadership for alleviating the labor shortage in specific areas and specific economic sectors. By themselves or even taken together, they cannot "solve" the Soviet labor problem, however. Rather, they should be seen as parts of a larger campaign that must include substantial economic reform and, possibly, the diversion of military manpower into nonmilitary sectors.

## BIBLIOGRAPHY

- Allworth, Edward (ed.), *The Nationality Question in Soviet Central Asia*, Praeger, New York, 1973.
- Andreeva, L. Z. (ed.), *Ekonomika melioratsii zemel' nechernozemnoi zony RSFSR*, Leningrad, 1978.
- Antonov, N. A., "Dorogami druzhby," *Uzbekistan-Nechernozem'iu*, Moscow, 1979, pp. 35-36.
- Antonov, V. S., "Energiia Sibirskikh rek i severnyi morskoi put'," *Priroda*, No. 6, 1963, pp. 25-26.
- Arutiunian, Iu. V., "Sotsial'nye aspekty kul'turnogo rosta sel'skogo naseleniia," *Voprosy filosofii*, No. 9, 1968, pp. 123-124.
- Atamirzaev, A. and A. Atagoziev, "Population Problems and Regional Demographic Policy," *Ozbekistan Kommunisti*, No. 1, January 1978, pp. 40-45.
- Avtorkhanov, Abdurakhman, "The System of Political Control by the Party," *Studies on the Soviet Union, The Soviet Moslem World, Part I*, New Series, Vol. 7, No. 4, 1968, pp. 37-44.
- Azrael, Jeremy, *Emergent Nationality Problems in the USSR*, The Rand Corporation, R-2172-AF, September 1977.
- (ed.), *Soviet Nationality Policies and Practices*, Praeger, New York, 1978.
- Bachurin, A., "Zadachi uskoreniia rosta proizvoditel'nosti truda," *Voprosy ekonomiki*, No. 8, 1978, p. 7.
- Bacon, Elizabeth E., *Central Asians Under Russian Rule*, Cornell University Press, Ithaca, 1966.
- Bagdasarian, A. M., *Sovetskii opyt ekonomicheskogo vyравnivaniia natsional'nykh respublik*, Grozny, 1971.
- Bedrintsev, K., "Sotsial'no-ekonomicheskie problemy razvitiia proizvoditel'nykh sil Uzbekistana," *Kommunist Uzbekistana*, No. 12, 1978, pp. 12-20.
- Beliauskii, L., "Preemstvennost' agrarnoi politiki," *Pravda vostoka*, 18 August 1978.
- Belova, V. A. et al., *Skol'ko detei budet v sovetskoi sem'e: Sbornik statei*, Moscow, 1977.
- Bennigsen, Alexandre A., "The Nature of Ethnic Consciousness in Central Asia," paper presented at the International Communications Agency Conference on Soviet Central Asia, 31 October 1978.
- , "Muslim Conservative Opposition to the Soviet Regime: The Sufi Brotherhoods of the North Caucasus," in Azrael, 1978.
- Bennigsen, Alexandre A. and Chantal Lemerrier Quelquejay, *Islam in the Soviet Union*, Pall Mall Press, London, 1967.
- Bennigsen, Alexandre A. and S. Enders Wimbush, "Muslim Religious Dissent in the USSR," in James P. Scanlan and Richard T. DeGeorge (eds.), *Marxism and Religion in Eastern Europe*, R. Reidel, Dordrecht, Holland and Boston, Mass., 1974, pp. 133-146.
- , *Muslim National Communism in the Soviet Union: A Revolutionary Strategy for the Colonial World*, University of Chicago Press, Chicago, 1979.
- Bernard, Phillippe J., *Planning in the Soviet Union*, Pergamon Press, Oxford, 1966.
- Brezhnev, L. I., *O dal'neishem razvitii sel'skogo khoziaistva SSSR (Doklad na plenum TsK KPSS)*, Moscow, 4 July 1978a.
- , "Tselina," *Kommunist Tadzhikistana*, 11 November 1978b.
- Burg, Steven L., "Russians, Natives and Jews in the Soviet Scientific Elite: Cadre Competition in Central Asia," *Cahiers du Monde Russe et Soviétique*, Vol. 20, No. 1, January-March, 1979, pp. 41-59.
- Carlisle, Donald S., "Modernization, Generations, and the Uzbek Soviet Intelligentsia," in

PRECEDING PAGE BLANK - NOT FILMED

- Paul Cocks, Robert V. Daniels, and Nancy Whittier Heer (eds.), *The Dynamics of Soviet Politics*, Harvard University Press, Cambridge, 1976.
- Carrère d'Encausse, Hélène, *L'empire éclaté: La révolte des nations en U.R.S.S.*, Flammarion, Paris, 1978.
- Central Intelligence Agency, *USSR: Some Implications of Demographic Trends for Economic Policy*, Washington, D.C., January 1977, p. 3.
- , *Soviet Agricultural Commodity Trade, 1960-76: A Statistical Survey*, Washington, D.C., September 1978, pp. 11, 15.
- Chinn, Jeff, *Manipulating Soviet Population Resources*, Holmes and Meier, New York, 1977.
- Churakov, V. Ya., *Problemy regional'nogo balansa trudovykh resursov*, Moscow, 1977.
- Conolly, Violet, *Beyond the Urals: Economic Developments in Soviet Asia*, Oxford University Press, London, 1967.
- , *Siberia: Today and Tomorrow*, Collins, London and Glasgow, 1975.
- , "Turning the Rivers of Siberia in Their Course," *Radio Liberty Research*, RL 189/78, 29 August 1978.
- Critchlow, James, "Signs of Emerging Nationalism in the Moslem Soviet Republics," in Norton T. Dodge (ed.), *The Soviets in Asia*, The Cremona Foundation, Mechanicsville, Maryland, 1972.
- Dadashev, A., "O povyshenii effektivnosti ispol'zovaniia trudovykh resursov, *Voprosy ekonomiki*, Vol. 26, No. 4, 1974, p. 122.
- and V. Kryukov, "Kompleksnyi ekonomicheskii analiz i planirovanie trudovykh resursov," *Sotsialisticheskii trud*, No. 7, 1978, pp. 150-151.
- Davletshin, Tamurbek, "Structure of State Administration," *Studies on the Soviet Union, The Soviet Moslem World, Part I*, New Series, Vol. 7, No. 4, 1968, pp. 28-36.
- Demidov, S., "Shaidullinskaia sosna," *Pravda vostoka*, 30 July 1978.
- Dimov, G., Ye. Vostrukhov, and A. Illarionov, "A Neighbor's Helping Shoulder," *Izvestiia*, 15 and 17 May 1974; *CDSP*, Vol. 26, No. 20, pp. 11-12.
- Esnian, V., "Kangurtskie shvei," *Kommunist Tadzhikistana*, 1 October 1978.
- Feshbach, Murray, "Prospects for Massive Out-Migration from Central Asia During the Next Decade," paper prepared for the Foreign Demographic Analysis Division, Bureau of Economic Analysis, U.S. Department of Commerce, February 1972.
- and Stephen Rapawy, "Soviet Population and Manpower Trends and Policies," in Joint Economic Committee, Congress of the United States, *Soviet Economy in a New Perspective*, 14 October 1976, p. 115.
- Galetskaia, R., "The Areas of Demographic Policy," *Voprosy ekonomiki*, No. 8, pp. 149-152; *CDSP*, Vol. 27, No. 45, pp. 15-16.
- Gladyshev, A. N. and V. P. Mozhin (eds.), *Proizvoditel'nye sily nechernozemnoi zony RSFSR: Problemy i perspektivy razvitiia agropromyshlennogo kompleksa*, Moscow, 1977.
- Gokhberg, M. Ya. and B. M. Shtul'berg, *Ekonomicheskoe obosnovanie territorial'nykh planov*, Moscow, 1977.
- Goyette, Arthur Vincent, Jr., *Ideology and Industrial Development: The Case of Soviet Central Asia*, Ph.D. dissertation, The University of North Carolina, Chapel Hill, 1974.
- Gramoteeva, L. I., *Effektivnost' territorial'noi organizatsii proizvodstva*, Moscow, 1979.
- Gustafson, Thane, "Institutional and Regional Forces in Soviet Politics: The Debate over Re-routing Rivers to the South," paper prepared for the Annual Meeting of the American Political Science Association, Washington, D.C., 1977, pp. 26-33.
- Heer, David M., "Three Issues in Soviet Population Policy," *Population and Development Review*, Vol. 3, No. 3, September 1977, pp. 229-252.
- Hodnett, Grey, "Technology and Social Change in Soviet Central Asia: The Politics of Cotton Growing," in Henry W. Morton and Rudolf L. Tokes (eds.), *Soviet Politics and Society in the 1970s*, The Free Press, New York, 1974.

- Hooson, David, "The Outlook for Regional Development in the Soviet Union," *Slavic Review*, Vol. 31, No. 3, September 1972, pp. 535-554.
- Kapustin, Ye. and N. Kuznetsova, "Regional'nye osobennosti povysheniia zhiznennogo urovnia naseleniia," *Ekonomicheskie nauki*, No. 1, January 1972, pp. 49-58.
- Kazimovsky, Ye., "Prospects for the Formation and Utilization of Labor Resources in the USSR," *Ekonomicheskie nauki*, No. 8, August 1973, pp. 33-45; *CDSP*, Vol. 26, No. 3, pp. 5-6.
- Khorev, B. S., "Osnovnye sdvigi v rasselenii naseleniia v SSSR i nekotorye aktual'nye problemy migratsionnoi politiki," in *Narodonaselenie: prikladnaia demografiia*, Moscow, 1973, p. 12.
- and V. N. Chapek, *Problemy izucheniia migratsii naseleniia*, Moscow, 1978.
- Kolarz, Walter, *Russia and Her Colonies*, George Philip and Son Ltd., London, 1952.
- Komar', Iu., "Zelenet' kholmam," *Pravda vostoka*, 16 January 1979.
- Kovalev, Iu., "Prodolzhenie legendy," *Pravda vostoka*, 6 December 1978.
- Krisch, Henry, "Diverting Soviet Rivers: Controversies and Prospects," *Radio Liberty Research*, R1, 251/76, 10 May 1976.
- Kurkchi, Aider and Irma Mamaladze, "Thinking About Tomorrow," *Molodoi Kommunist*, No. 8, August 1978; *CDSP*, Vol. 30, No. 4, p. 13.
- Kvasha, Aleksandr, "Demograficheskii optimum," *Obshchestvennye nauki*, No. 4, 1978, pp. 47-57.
- Lapidus, Gail Warshofsky, *Women in Soviet Society: Equality, Development, and Social Change*, University of California Press, Berkeley, 1978.
- Latifi, O., "Kogda rabota ne zhdet," *Pravda*, 1 June 1975.
- LeCompte, Gare, *Soviet Muslims and the Afro-Asian World*, Ph.D. dissertation, American University, Washington, D.C., 1971.
- Lewis, Robert A., "The Irrigation Potential of Soviet Central Asia," *Annals of the Association of American Geographers*, Vol. 52, March 1962.
- , Richard H. Rowland, and Ralph S. Clem, *Nationality and Population Change in Russia and the USSR: An Evaluation of Census Data, 1897-1970*, Praeger, New York, 1976.
- , "Modernization, Population Change and Nationality in Soviet Central Asia and Kazakhstan," *Canadian Slavonic Papers*, Vol. XVII, Nos. 2 and 3, Summer and Fall, 1975, pp. 286-301.
- Lopatin, I., "Krai khlopka—tekstil'nomu kraiu," Parts 1 and 2, *Pravda vostoka*, 13 and 14 July 1978.
- Loshakov, V. G., *Sistema zemledeliia v nechernozemnoi zone*, Moscow, 1976.
- Mamarasulov, S. M., "Po zakonom bratstva," *Uzbekistan-Nechernozem'iu*, Moscow, 1979, pp. 7-8.
- Mamedov, A., "Bratu brat," *Pravda vostoka*, 13 October 1974.
- , *Irrigatsiia srednei azii*, Moscow, 1969.
- Manevich, E. L., "Vosпроизводство naseleniia i ispol'zovanie trudovykh resursov," *Voprosy ekonomiki*, No. 8, 1978, pp. 38-48.
- Marin, Yuri, "Central Asia Through Soviet Eyes," *Studies on the Soviet Union. The Soviet Moslem World, Part II*, New Series, Vol. 8, No. 1, 1968, pp. 69-87.
- Maslennikov, N. I. et al., *Perspektivy razvitiia ekonomiki i kul'tury nechernozemnoi zony RSFSR*, Moscow, 1976.
- Maslova, I. S., "Effektivnost' ispol'zovaniia trudovykh resursov," *Voprosy ekonomiki*, No. 8, 1978, p. 56.
- Massell, Gregory J., *The Surrogate Proletariat: Moslem Women and Revolutionary Strategies in Soviet Central Asia, 1919-1929*, Princeton University Press, Princeton, 1974.

- , "Modernization and National Policy in Soviet Central Asia: Problems and Prospects," in Paul Cocks, Robert V. Daniels, and Nancy Whittier Heer (eds.), *The Dynamics of Soviet Politics*, Harvard University Press, Cambridge, 1975.
- McAuley, Alastair and Ann Hegelson, "Soviet Labour Supply and Manpower Utilisation 1960-2000," paper prepared for the Joint Whitehall-Academic Conference, London School of Economics, December 1978.
- Mel'nikov, V. F., *Intensifikatsiia i effektivnost' sel'skokhoziaistvennogo proizvodstva nechernozemnoi zony*, Moscow, 1975.
- Mints, A. A., "A Predictive Hypothesis of Economic Development in the European Part of the USSR," *Soviet Geography*, No. 1, 1976, pp. 20-21.
- Mukhamadiev, Iu., "Na zemle novgorodshchiny," *Pravda vostoka*, 14 September 1978.
- Musakhanov, M., "Fermi orashaemoi zony," *Pravda vostoka*, 20 August 1978.
- Nekrasov, N. and N. Rasin, "Vody severa pomogut iugu," *Pravda*, 11 June 1978.
- Nekrich, Aleksandr M., *The Punished Peoples: The Deportation and Fate of Soviet Minorities at the End of the Second World War*, Norton, New York, 1978.
- Nove, Alec, *The Soviet Economic System*, George Allen & Unwin, Ltd., London, 1977, pp. 64-75.
- and J. A. Newth, *The Soviet Middle East: A Communist Model for Development*, Praeger, New York, 1967.
- Parfenov, V., "Chelovek, zavod, gorod," *Pravda*, 25-26 November 1977.
- Parnov, Ereimei, "Puti osvoeniia pustyni," *Kommunist*, No. 9, June 1975, p. 68.
- Perevedentsev, V. I., "Population Movement and Labor Supply in Siberia," *Soviet Sociology*, Vol. 19, No. 3, 1966.
- , "The Future of the Small City: 50,000,000 Live Here," *Literaturnaia gazeta*, 17 January 1968; *CDSP*, Vol. 20, No. 3, 1968, p. 12.
- , "Iz derevni v gorod," *Nash sovremennik*, No. 11, 1972, p. 102.
- , "Population Distribution and Migration," *Zhurnalists*, No. 2, 1974; *CDSP*, Vol. 27, No. 29, 1974, pp. 22-23.
- , *Gorod i vremia*, Moscow, 1975a.
- , *Metody izucheniia migratsii naseleniia*, Moscow, 1975b.
- , "Shagni za okolitsu," *Komsomolskaia pravda*, 28 January 1976a.
- , "Zhazhda i vody," *Literaturnaia gazeta*, 22 September 1976b, p. 10.
- , "Ob'iaвление na zabore: trudovye resursy segodnia i zavtra," *Zhurnalists*, No. 5, May 1978, p. 20.
- Pipes, Richard, *The Formation of the Soviet Union*, Harvard University Press, Cambridge, 1964.
- Powell, David E., "Labor Turnover in the Soviet Union," *Slavic Review*, Vol. 36, No. 2, June 1977, pp. 268-285.
- Rakhim, Ibragim, "Khashar na poliakh bratsva," *Znamia*, No. 7, 1978, p. 206.
- Rakhimov, Rashid K., *Osnovnye proizvodstvennye fondy i ekonomicheskaiia effektivnost' ikh ispol'zovaniia*, Dushanbe, 1965.
- Rakowska-Harmstone, Teresa, "The Dialectics of Nationalism in the USSR," *Problems of Communism*, Vol. 23, May-June 1974, pp. 1-22.
- Rashidov, Sh. R., "Natsional'nye otnosheniia v usloviakh razvitogo sotsializma," *Voprosy filosofii*, No. 10, 1978, p. 8.
- , "Novyi etap v razvitii agrarnoi politiki partii," *Pravda vostoka*, 26 July 1978b.
- Rasulov, D., "Khoziaistvenno-organizatorskaia i vospitatel'naia rabota—ediny," *Agitator Tadzhikistana*, No. 19, 1978, p. 9.
- Rywkin, Michael, "Central Asia and Soviet Manpower," *Problems of Communism*, January-February 1979, pp. 10-12.

- Saiakbaeva, A. A., *Izvestiia Akademii Nauk Kirgizskoi SSR*, No. 4, 1978, in *JPRS Translations on USSR Political and Sociological Affairs*, No. 923, 22 January 1979, pp. 29-36.
- Salimov, Kh., *Naselenie srednei azii*, Tashkent, 1978.
- Sbytova, L., "Istochniki rabochei sily v sovremennykh usloviakh," *Voprosy ekonomiki*, No. 6, 1978, p. 37.
- Schroeder, Gertrude, "Soviet Wage and Income Policies in Regional Perspective," *ACES Bulletin*, Fall 1974, pp. 3-19.
- Shabad, Theodore, "Central Asia and the Soviet Economy: Implications for Policy," paper presented at the International Communications Agency Conference on Soviet Central Asia, 31 October 1978, pp. 3-5.
- Shatskikh, N. N. and A. G. Khadzhibaev, *Ispol'zovanie trudovykh resursov v sel'skom khoziaistve Tadzhikistana*, Dushanbe, 1969.
- Sheehy, Ann, "Some Aspects of Regional Development in Soviet Central Asia," *Slavic Review*, Vol. 31, No. 3, September 1972a, pp. 555-563.
- , "The Central Asian Republics," *Conflict Studies*, No. 30, December 1972b.
- Shimansky, V., "The 'Vegetable Production Line': Successes and Problems," *Planovoe khoziaistvo*, No. 7, July 1978, pp. 44-45; *CDSP*, Vol. 30, No. 38, pp. 9-10.
- Shister, G. A., "O nekotorykh tendentsiiakh razvitiia rabocheho klassa Uzbekistana v usloviakh razvitogo sotsializma," *Nauchnyi kommunizm*, No. 3, 1977, p. 34.
- Shuruev, A., "Trudovye resursy SSSR i podgotovka spetsialistov," *Ekonomicheskie nauki*, No. 10, 1978, pp. 64-72.
- Smith, Hedrick, *The Russians*, Times Books, London, 1976.
- Solzhenitsyn, Aleksandr, *Letter to the Leaders of the Soviet Union*, Harper & Row, New York, 1974.
- Topilin, A. V., *Territorial'noe pereraspredelenie trudovykh resursov v SSSR*, Moscow, 1975.
- Tsamutali, A. C. and F. K. Kaiumov, *Agrarnaia politika partii i razvitie sel'skogo khoziaistva Uzbekistana*, Tashkent, 1979.
- Tursonov, E., "Mosty trudovogo bratstva," *Pravda vostoka*, 13 December 1974.
- Ukrainskii, F. Ia., "Vozmozhnye puti razvitiia oroshaemogo zemledeliia srednei azii i budushchee Aral'skogo Moria," *Izvestiia Akademii Nauk SSSR, Seriya Geograficheskaya*, No. 1, 1971, p. 70.
- United Nations, Economic Commission for Europe, *Economic Bulletin for Europe*, Vol. 9, No. 3, Geneva, November 1957.
- Urlanis, B. Ts., *Problemy dinamiki naseleniia SSSR*, Moscow, 1974.
- U.S. Department of Commerce, Social and Economic Statistics Administration, Bureau of the Census, *Projections of the Population of the U.S.S.R. and Eight Subdivisions, by Age and Sex: 1973 to 2000*, Series P-91, No. 254, June 1975.
- Uzbekistan-Nechernozem'iu*, Moscow, 1979 (pamphlet).
- Valentei, D. I., *Osnovy teorii narodonaseleniia*, Moscow, 1977.
- et al., *Nechernozem'e: demograficheskie protsessy*, Moscow, 1977.
- Vishnevskii, A. G., *Demograficheskaya revoliutsiia*, Moscow, 1976.
- Voronitayn, Sergei, "Continuing Controversy over Proposed Diversion of Siberian Rivers," *Radio Liberty Research*, RL 174/78, 9 August 1978.
- Voropaev, G., "Chto by dat' vodu iugu," *Pravda vostoka*, 30 August 1978.
- Wheeler, Geoffrey, "The Study of Soviet Central Asia Today," *Middle Eastern Studies*, Vol. 12, No. 2, May 1976, pp. 169-176.
- Wimbush, S. Enders, "Great-Russians and the Soviet State: Dilemmas of Ethnic Dominance," in *Azrael*, 1978, pp. 349-360.
- , "The Russian Nationalist Backlash: Responses to Non-Russians," *Survey*, Autumn 1979a.

- , "Divided Azerbaidzhan: Nation-Building, Assimilation, and Mobilization Between Three States," in William O. McCagg and Brian Silver (eds.), *Sino-Soviet Ethnic Frontiers*, Pergamon Press, New York, 1979b.
- Winter, Don, "Project 100,000—The Forgotten Men of the War," *National Journal*, 15 April 1978, p. 589.
- Yakuba, Ye. I., "Rural Migration in the Ukraine," *Ekonomika Sel'skogo khoziaistva*, No. 6, June 1978, pp. 85-90; *CDSP*, Vol. 30, No. 44, pp. 13-14.
- Yanov, Alexander, *The Russian New Right*, University of California Press, Berkeley, 1978.
- Zaionchkovskaia, Zh. A., *Novosely v gorodakh: metody izucheniia prezhivaemosti*, Moscow, 1972a.
- , "Obrazovanie i kvalifikatsiia kak faktory podvizhnosti i adaptatsii novoselov," *Urbanizatsiia, nauchno-tekhnicheskaia revoliutsiia i rabochii klass*, Moscow, 1972b.
- Zhbanov, K., "Vdali ot doma, vmeste so stranoi," *Kommunist Tadzhikistana*, 1 January 1979.
- Ziiaadullaev, S. K., "K voprosu o perebroske chasti stoka sibirskikh rek v sredniuiu aziu," *Kommunist Uzbekistana*, No. 2, 1979., p. 12.
- et al. (eds.), *Proizvoditel'nye sily Uzbekistana i perspektivy ikh razvitiia*, 2nd ed., Tashkent, 1974.